

MAY 1959 • 40 CENTS

Consumer BULLETIN

The Original Consumer Information Magazine

Testing and Reporting on Products since 1928



SMALL PLEASURE BOATS

CADILLAC, MERCURY, PONTIAC AUTOMOBILES

AUTOMATIC WASHERS

Diet and your health

Safer use of power mowers

Moles in your lawn?

Tubeless tires—new, recapped

Current movies and records

BABY BOTTLES and nipples



A seat and back rest for motorists

This new auto accessory may prove to be helpful to some drivers, particularly those who are short in stature and have difficulty in finding a comfortable driving position



AUTOMOBILE manufacturers are literally putting the squeeze on the owners and drivers of their cars by lowering car roofs without lowering the car floors by a corresponding amount. As a result, a tall person finds it necessary to assume a slouched position when driving, even though the height of the driver's seat has been reduced and the back rest of the seat slanted considerably. A short person, too, has his troubles and often finds it helpful, indeed necessary, to prop himself up and forward with pillows so as to have his line of vision high enough to permit safe driving and to be able, at the same time, to reach the accelerator, clutch, and brake pedals.

Use of the *Mark-Fore Back-Aide* by a tall person may actually add to his discomfort. It is likely, however, to provide a noticeable increase in comfort for the short driver or a person of medium height, for it will not only raise him about two inches, but will also provide good support at the small of the back while at the same time moving the seating position forward about two inches.

The *Mark-Fore* was used for some time by several members of CR's laboratory staff. In general, the taller drivers did not find it advantageous, possibly because it offered a rather firm support to the body and was thus not considered as comfortable as the seat of the car.

Other drivers, who were short in stature and normally had some difficulty in reaching the pedals, found the appliance a distinct aid to driving comfort.

There are some other advantages and disadvantages. The *Fiberglas* mesh, of which the *Mark-Fore* is principally constructed, does allow air circulation around the body of the driver and thus affords cooler seating on warm summer days. Because there was no provision to fasten it in place, however, the *Back-Aide* usually had to be repositioned each time the driver entered the car; in addition, the back of the rest usually fell forward when the driver got out of the car, an annoying characteristic. Users should consider that there is a good possibility that the flat steel spring used to provide adjustment of the back rest may permanently mar the upholstery on the back of the car seat after the *Back-Aide* has been in use for some time.

B. Intermediate

Mark-Fore Adjustable Back-Aide (Market Forge Co., Everett 49, Mass.) \$12.95. A combined seat and back rest for use by an automobile driver. Constructed of *Fiberglas* mesh on steel frames; construction and finish judged satisfactory. In CR's opinion, the device is likely to be helpful to drivers who are short in stature, particularly when it is used in late model automobiles.

The Consumers' Observation Post

DO YOU REALLY GET A CUT-RATE PRICE on a product bought "wholesale" or "at a big discount"? Sometimes you do, but it is always wise to do a little comparison shopping. The Indianapolis Better Business Bureau made a study of the price charged for five nationally-advertised products at two discount stores and three regular retailers. In several cases the price charged was lower at the regular retailer's store than the one asked by the discounter. The Remington Rollectric Razor, for example, was sold by one discounter at \$21.68, in contrast to a price of \$16.77 offered by one retailer. Shop a little and see what other stores charge for an item before you buy. Find out also whether you are buying a product "as is," without the right to return it if it is defective in any way.

* * *

MEN'S DRESS SHIRTS are usually cut to a specific size in the sleeve, collar, and body, and from fabrics that are preshrunk. Such shirts tend to retain their size after laundering, but sport shirts show a wide variation in this respect, according to the American Institute of Laundering. The A.I.L. notes that sport shirts are made from a wide variety of fabrics and, instead of being marked with specific sizes, are often labeled in what are known as "skip sizes," S, M, L, and XL. Shrinkage of the fabrics of some sport shirts may run as high as 5 percent. The American Institute of Laundering points out that given this amount of shrinkage, a 34-inch sleeve would shrink 1.7 inches when washed. The A.I.L. suggests that in buying a garment that is "skip-sized," it will be wise to get it a little on the loose side to allow for shrinkage, particularly where collar comfort and sleeve length are concerned.

* * *

EXHAUST FUMES FROM AUTOMOBILES are a matter of concern to health departments of many cities. In Los Angeles, for example, exhaust fumes are held responsible in part for the characteristic smog that disrupts traffic and irritates nose, throat, and eyes. At the annual meeting of the Society of Automotive Engineers earlier this year, five technical papers were presented, suggesting methods for reducing auto exhaust fumes, including several devices for oxidizing and burning 60 to 75 percent and more of the hydrocarbons in the exhaust gases. The addition of such devices to cars, particularly in large cities, will be an important contribution to the comfort and safety of city dwellers.

* * *

UPRIGHT VACUUM CLEANERS should have a somewhat longer service-life expectancy than the tank type. According to a study by the Institute of Home Economics of the U.S. Department of Agriculture, the estimated service life of a new upright is 18 years; of the tank type, 15 years. From an upright vacuum cleaner bought secondhand, a service life of 8 years is to be expected.

* * *

POTATOES FOR CHIPS that are popular cocktail and TV snacks are peeled in a mass-production operation with abrasives, according to Food Service Magazine. The journal, however, points out that a more thorough cleaning job can be done if the potatoes are dipped for three minutes in a solution of lye and water, heated to 140°F, and then given a series of pressure rinses in water. Next the potatoes are dipped in a solution of hydrochloric acid and water to neutralize any remnant of the lye solution, and finally they are dipped in a sodium bisulphite solution to prevent discoloration. The whole thing sounds quite unappetizing, even if the chemicals could be washed off completely before the potatoes are cooked. As a matter of fact, the magazine pointed out that, if the chemicals are not washed off, the potatoes tend to develop an off flavor.

AN UNUSUAL NUMBER OF CHILDREN and young adults in Great Britain have complained to their doctors of pain at the base of the neck associated with a pain in the upper abdomen. Analyzing the probable causes, several physicians writing to the British Medical Journal came to the conclusion that the current hula-hoop fad was probably responsible. In one case, the child ran a temperature and was unable to sit up unsupported. It was thought at first she had polio, but after hospitalization she recovered completely and her ailment was ascribed to her proficient use of the hula-hoop.

* * *

TENDERIZERS FOR TOUGH MEAT are being widely featured. The enzymes on which they are based come from the papaya melon and plant, pineapples, the fig fruit and plant, or from *Aspergillus oryzae*, a species of mold. According to various departments of the federal government, "no hazard is involved in their use in reasonable amounts." In a study of the various products of this nature by an expert committee reporting to the North Carolina Department of Agriculture, the recommendation is made that either the housewife should apply the tenderizer herself or the use of tenderizers on meats to be sold generally in the state should be carefully regulated. The report makes the point that, since the tenderizer is applied by dipping meat in a solution in which the enzymes have been dissolved, the vats in such cases should be kept clean and the operation carried on by competent personnel, with the procedure rigidly supervised in order to prevent its becoming a "dirty dipping vat operation." The report also suggests that each piece of tenderized meat be individually wrapped and properly labeled. Furthermore, such tenderizing should be limited to frozen meats only, since, in unfrozen meat, the enzymes would continue working until the meat became mushy and decomposed.

* * *

FABRICS OF DACRON BLENDS with rayon, cotton, or wool require extra care. They should be pressed with an iron at rayon setting, according to the National Institute of Drycleaning, preferably on the wrong side. Shine or glaze marks will be an indication of damage caused by too much heat in pressing. Such marks are more visible on dark or light solid shades than on checked, plaid, or heathered fabrics.

* * *

POISON IVY IS A SPRINGTIME HAZARD. Some people are so susceptible that simply walking over a path with poison ivy growing alongside seems to produce irritation. The trouble is caused by a non-volatile oil that is present also in poison sumac and poison oak. Dr. Ralph Hall of Westfield, New Jersey, points out that calamine lotion containing phenol, or some other carbolized lotion, has been found not only ineffective, but irritating as well. The irritant oil called toxicodendrol has much in common with the phenolic group of chemical substances. He notes that poison ivy dermatitis is not contagious, will not spread, and is not made worse by water. He recommends soaking the affected area in unmedicated hot water for as long as 10 minutes to obtain relief from itching.

* * *

THE USE OF PESTICIDES on food crops is a matter of increasing concern to many consumers. Currently, the Food and Drug Administration has granted permission for the use of a microbial pesticide, *Bacillus thuringiensis* Berliner, to be applied as a spray on food and forage crops against certain types of insects; heretofore this type of pesticide has been permitted only when applied to the soil and not directly to crops. Using the consumer as a guinea pig for a commercial experiment, the Food and Drug Administration will allow limited use of this chemical for a year's trial to see whether it really is safe and without harmful effects to human beings.

(The continuation of this section is on page 37)

Consumer Bulletin

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Listings usually are arranged in alphabetical order by brand name (not in order of merit) under each quality or performance rating. A numeral 1, 2, or 3 at the end of a listing indicates relative price, 1 being low, 3 high. Where the 1, 2, 3 price ratings are given, brands in the 1, or least expensive group, are listed alphabetically, followed by brands in price group 2, also in alphabetical order, etc. A quality judgment is wholly independent of price.

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"Tech" Dinghy on page 6 designed by M.I.T. and manufactured in fiberglass by the Beetle Boat Company, Inc., East Greenwich, Rhode Island.
Photograph of Day Sailer on page 6, by George D. O'Day Associates, 9 Newbury St., Boston 16, Mass.
Cover photo from Lyman Boat Works, Inc., Sandusky, Ohio.



Day Sailer



Dunphy Surf Rider Model 714

→
Beetle "Tech" Dinghy



Small pleasure boats

A report on the current models

BOATING is no longer for the wealthy alone. In 1957, 35 million Americans are said to have taken part in this water sport, and the number of boating enthusiasts is steadily and rapidly increasing.

For the person planning to buy a boat this year—particularly his first boat—a visit to the Motor Boat Show, held in New York in January, would have done little to clarify thinking or simplify choice. The show offered the prospective buyer the convenience of being able to examine hundreds of boats and accessories in one location, but, unlike the London Motor Boat Show, it provided nothing in the way of guidance or advice on how one should analyze one's boating needs and how to select the right model for those needs. Indeed, the conflicting claims of the increasingly attractive and alluring advertising materials would only have increased the prospective buyer's confusion. The Show did, however, reflect some clear-cut trends in the booming boat industry that are of direct interest and concern to many millions of consumers.

Pleasure-boat manufacturing, which before World War II was concentrated on the East Coast among a few well-established and generally conservative firms, has become dispersed across the country among a large number of young and highly competitive firms. The relatively new construction materials—molded plywood, aluminum, fiber glass, and other laminated plastics—

are seriously threatening the position of wood and sheet plywood in the building of small boats. And the new firms, many of them exploiting the unique fabrication characteristics of the new materials, are competing for the steadily increasing market by offering a variety of designs and models unheard of only a few years ago.

All of these trends can work to the advantage of the potential buyer, and to some extent they have done so. Mass-production methods have cut costs, and so has geographic dispersion (since as much as 25 percent of the price of a boat may represent transportation costs from manufacturer to dealer or user). And there is no question that today's buyer can find more models to choose from and a generally more active market in which to buy than in past years.

Unfortunately, however, there are other trends working strongly against the best interests of the consumer, especially if he is inexperienced in buying a boat. The advertising literature, which 10 years ago was notably conservative, relating itself largely to technical specifications, has become considerably louder and vaguer, appealing to the customer largely on the basis of the boat's speed and design—two factors which the neophyte buyer is in the worst possible position to judge properly. Perhaps as a result of this advertising, the most popular outboard motor in terms of units sold is the 15 horsepower, whereas the

most popular hull size is 12 to 14 feet. Although these data are open to several interpretations, they indicate that many people are buying boat-motor combinations that develop dangerously high speeds (a subject to be discussed in greater detail later in this article).

Another trend is the trade's use of the techniques of appeal used by the automotive industry—exaggerated streamlining and modernistic (and, incidentally, quite dangerous) ornamentation. The highly polished deck surface of most of the current outboard hulls can be treacherously slippery when wet, as it often is when the boat is pitching and the owner is standing on the deck—perhaps barefooted—handling a docking line. When such a deck is fitted with cleats that have been needlessly streamlined to sharp edges, a slip can produce serious injuries even if it does not result in a "man overboard" situation. Such polished surfaces are, of course, highly vulnerable to damage by sandy feet as well as the usual bumps and bruises that even the most carefully handled boat is subject to. It is noteworthy that the larger and more expensive craft often have a safer and more functional non-skid paint on the deck in place of the high-gloss finish of the smaller, cheaper models, all too often designed for inexperienced and less discerning buyers.

The tail fins and other "airfoil" contours now becoming common on small outboard hulls not

The large increase in the number of manufacturers, hull models, and potential customers has given the boat buyer a wider choice, but it has also greatly increased the number of things he must be on guard against. The fact that automobile manufacture requires an enormous investment in plant and dies generally guarantees a modicum of good (or at least adequate) engineering in the product. But a boat manufacturer can set up in business in a good-sized garage with no more investment than a set of power tools, some plywood, and a completely untried set of plans. This situation obviously presents real problems to the potential buyer, who will need to inform himself about a number of aspects of boat buying in order to keep from being taken in through buying a poorly and inexpertly built boat or a type of boat that fails in some important way to meet his needs.

only reduce the usable deck space but sharply increase the possibility of damage in collision with dock piling or a bridge pier. And the flying bridges added to shallow-draft outboard cruisers to make these medium-priced craft look like luxurious seagoing yachts raise to dangerous levels both the center of gravity and the wind resistance. Perhaps more important, they may persuade the owner that he has a seagoing yacht and thus tempt him into waters too exposed for the seaworthiness and cruising range of his boat.

Factors influencing choice of a hull

The buyer of an automobile can make his choice largely on the basis of performance or appearance, and need give relatively little regard to his personal needs in terms of family size, length of average trip, local terrain, etc. Aside from the choice of a convertible, sedan, or station wagon to suit his individual preferences, he can be reasonably sure that any make he chooses will perform adequately, if not with the greatest efficiency, reliability, and economy, on long trips or short, on highways or in city traffic, and in mountainous or level terrain. The choice of a boat, on the other hand, depends almost entirely upon the individual buyer's specific intentions with regard to its use. *A comparison of the performance characteristics of two similar hulls of different makes is much less important than the proper choice of a basic type.* The buyer should therefore answer the following questions to his own satisfaction and thus be enabled to settle on a *type* of boat before shopping the market for a boat best meeting his needs and adapted to his pocketbook, in the type he chooses.

Outboard, inboard, or sailboat?

The inboard motorboat under 25 feet long is usually more sturdily built and better designed hydrodynamically than the outboard hull of comparable size. However, the inboard type is not recommended for the novice because it is less maneuverable and considerably more vulnerable to impacts against underwater obstacles. Furthermore, since hull and engine are combined in one unit, it is impossible to repair either of these components alone; in this respect, the outboard has a major advantage. The market for resale of an inboard boat is much more limited than that for the outboard.

The increasing number of small sailing craft offered in this year's market seems to indicate that many people who began boating with an outboard—perhaps because a gasoline engine was familiar to them—are turning in large numbers to the sailboat. Although both sailing enthusiasts and sports writers like to regard sailing as an al-



Deep C

most mystic skill, anyone who can handle an outboard motor can also learn to handle a small sailboat safely; in racing, however, it takes time to develop skill. The buyer who is not restricted in his enjoyment of sailing by the nature of his local waterways should seriously consider a sailboat, because it offers far greater participation, exercise, exhilaration, and sport than the usual outboard boat.

How much portability?

Unless vacation plans are quite stable—involving, for example, a yearly stay at the same summer cottage—the buyer should consider the *portability* of any boat he intends to buy. A boat that can be carried on a car roof or on a trailer can add a good deal to the enjoyment of any vacation in any part of the country.

For safe transport on an automobile roof rack and for easy loading by two people, a boat should not exceed 14 feet in length or 100 pounds in weight. Trailers can easily accommodate boats up to 21 feet and 1000 pounds without undue strain on either car or driver, but such a trailer will require an investment of about \$200 and will not be usable for any other purpose except as a cradle for the boat in winter storage. Hence, unless he needs a large hull and plans to do a great deal of traveling, the prospective buyer might do better with the car-top model, even if it does require him to sacrifice a foot or two of length. For persons who take trips only at rare intervals, boat trailers are becoming increasingly available for rental by the day or week.

How much speed?

It is important to realize that most manufacturers (of outboard motors as well as hulls) tend to overemphasize speed—much as automobile manufacturers overemphasize horsepower—often with equal disregard for the boat users' safety. There are only four reasons for speed on the water: for water skiing, for exhilaration, to overcome the effects of strong tide or current, and to avoid tedium on trips that are made repeatedly or that take one through uninteresting waters.

For water skiing, a maximum speed of 24 miles per hour is quite sufficient to bring even a heavy

skier from his submerged starting position to the surface skiing position; the surface position can be maintained at a speed of 20 to 22 miles per hour. Since skiing is usually done with only two persons in the boat (one alone is unsafe because he cannot watch his course and keep an eye on the skier simultaneously), a boat and motor combination capable of 24 miles per hour under light load is adequate for skiing and for most other purposes.

A speed of 20 miles per hour, though it seems slow on land, gives a satisfying sense of speed on water, and a speed of 10 miles per hour is sufficient to counteract almost any likely tide or current. The advertised speeds of 30 to 35 miles per hour are not only uneconomical in terms of motor investment and fuel cost, but are dangerous in the extreme. Few waterways are sufficiently clean, smooth, straight, and uncrowded to permit such speeds to be maintained for more than a minute or two. And even the most experienced operator cannot see submerged or partially submerged obstacles and other debris that can cause ruin of the hull, injury, or drowning if hit by a boat at high speeds.

Another reason for conservatism in speed (and hence in motor horsepower) is the increasing number of state and local regulations governing both speed and horsepower. Too large a motor may actually bar a boat from certain waters.

Because speed of a boat is strongly affected by wind, condition of the water surface, tide or current, and the load and trim of the hull, most of the hull manufacturers' data on the speed of their hulls with motors of specified horsepower should be regarded as being somewhat on the optimistic side. The only accurate way a buyer can determine the speed of a hull is to time it over a measured mile with his own motor, his usual passenger load, on his local waterway, under typical conditions of wind, water surface, and tide or current.

Cruising or day-sailing?

This year's Motor Boat Show reflected an increased interest in cruising by displaying a considerable number of outboard and sailing cruisers, many of them priced at less than a low-priced automobile. Such a boat, no matter how well equipped, is not actually a substitute for "a cottage at the lake," but it does offer the possibility of a pleasant and rather economical vacation for the family of two to four. Being designed essentially to provide living quarters, such boats necessarily have very limited deck and cockpit space and are therefore not suited for accommodating a large number of passengers "outdoors" for fishing, picnicking, or lounging. Because the

idea of a cruiser is so appealing and because the design is definitely unsuitable for any other purpose, the prospective buyer must make very certain that his actual use of the boat will be predominantly for cruising, and that its limited deck and cockpit space will not be a real handicap.

A compromise design that extends considerably the usefulness of the outboard cruiser is what is known as the camp cruiser—essentially a deep, wide hull that has no deck house or superstructure but only a "convertible" canopy and side curtains to provide shelter against the weather. This type may have one or two built-in bunks, but it is usually designed for use with sleeping bags and air mattresses. Although it lacks such refinements as galley sink, stove, and toilet, its lack of decking and superstructure makes it better suited than the cruiser for fishing, swimming, picnicking, or the transportation of an occasional heavy load of passengers. For the family which wants a boat all summer and will cruise for only two weeks of the time, the camp cruiser is the boat of choice. The same principle holds for sailing craft. A large open hull is much more versatile than a fully decked cruiser.

What size and hull shape?

An intelligent selection of hull length and capacity depends not merely on the passenger load to be carried but also upon the use to be made of the boat. In outboard hulls and (with a few exceptions) in sailing craft, the high-speed hull has considerably less capacity than the slower hulls. Outboard speed requires a shallow, light, flat-bottomed hull which the motor can easily lift up onto the surface of the water (in what is called the planing position), where it attains maximum speed. Such a hull does not provide the space needed for fishing, swimming, or picnicking, or for the gear that those activities involve. Moreover, the high-speed hull provides a wet and bumpy ride in any but the smoothest waters. It is, on the other hand, well suited for water skiing and for commuting—that is, for daily trips between an island or shoreline cottage and a village for groceries and mail.

For most other activities a deeper, roomier boat is preferable. For swimming or fishing, good capacity and stability are essential. Camp cruising, or even an occasional overnight trip, requires ample space for gear of all sorts and for passenger comfort on long runs.

A mistake commonly made by the inexperienced purchaser is to assume that the amount of thwart space is an accurate indication of the hull's passenger capacity. Since in many boats thwarts are used to provide structural rigidity and not merely seating space, using thwarts to their full capacity

as seats may simply result in overloading the boat in terms of sheer weight. In a small boat not equipped with a steering wheel, the stern thwart should be occupied by the operator alone, since another passenger seated alongside him may prevent him from steering freely by means of the motor tiller. Moreover, seating passengers side by side, subway fashion, does not give them the freedom of movement needed for comfort. The Outboard Boating Club of America, a trade organization, rates the seating capacity of many hulls manufactured by its members. These ratings should not be exceeded by the buyer except for very short runs on very smooth water.

If portability is not a factor governing choice, the buyer may do well to choose a hull slightly larger than his immediate needs dictate. In this way one or two unexpected guests will not require him either to cancel his boating plans for the day or dangerously overload his boat.

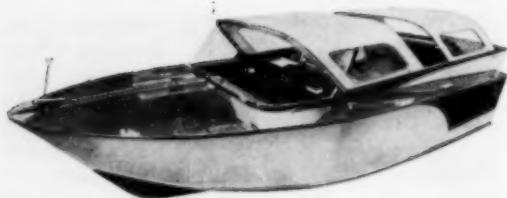
Which material?

The relatively new fabrication materials—aluminum, molded plywood, and fiber glass—have become popular enough to worry the manufacturers of the more conventional wooden hulls, if one can judge by the fact that many of them displayed at the Show a placard stressing the "natural" advantages of wood. The new materials are advertised as requiring much less maintenance than wood; such claims are often exaggerated and their promoters almost invariably say nothing about the inherent disadvantages of the new materials as compared to the older constructions.

Aluminum, unquestionably the lightest of all materials, is excellent if portability is essential. In fresh-water use it requires no painting unless the owner does not like the natural color of aluminum. Its resistance to impact and, in waters at the coast, to pitting by the chemical action of salt water, however, depends largely upon the specific alloy used. In recent years corrosion-resistant alloys have been developed for salt-water



Penn Yan Model QXH



Hummel Standard

use, but as the buyer has no way of evaluating the alloy used in a particular hull, he can rely only upon the guarantee of the manufacturer. All hulls made of aluminum require flotation compartments to provide buoyancy in case of swamping or capsizing, and in some models these compartments reduce the amount of usable space.

Molded plywood is leakproof and provides excellent impact-resistance and ease of repair, but it requires as frequent painting as the conventional planked or lapstrake wood hull. The painting is much easier, however, because of the smoothness of the exterior surface and the absence of ribbing and framing on the interior. Molded plywood also requires additional flotation, usually in the form of "Styrofoam" blocks. Molded plywood lends itself to a very attractive finish, and most manufacturers take advantage of this by giving the hull interior a high varnish finish. This looks very attractive when the boat is on the showroom floor, but the prospective buyer should try to visualize what sand, fishing bait, seaweed, and similar debris that accumulates in every well-used boat is likely to do to such a finish.

Fiber glass is leakproof and corrosionproof but, despite advertising claims, it does require occasional painting for satisfactory appearance and periodic painting of the part of the hull that is under water to prevent development of marine growths in salt water. Fiber-glass boats also require additional flotation, and most hulls of this material are too heavy to be transported on the top of a car. Some fiber-glass hulls have wooden seats, coamings, and other trim, and these require the usual maintenance. Where wood is not used for such trim, some owners may object to what they regard as the unpleasant feel of the fiber-glass surface.

Selecting a dealer

Because outboard hulls are being fabricated today by a wide range of manufacturers, ranging from the large, well-established factory to the local carpenter, the reliability and responsibility of the retail dealer constitute the buyer's primary protection. A poorly constructed hull can al-

most literally fall to pieces in one month of hard use, and even well-constructed boats occasionally have serious flaws due to the failure of a hull fastening, a defect in the molding process of either plywood or fiber glass, improper curing of a glued laminated construction, or a weak spot in an exterior surface of the plywood. Since it is prohibitively expensive to send a hull back to the factory when the factory is a considerable distance away, one's only possible recourse, as a practical matter, is to the dealer.

For this reason it is eminently desirable to buy from a *local boat dealer* rather than from a department store, sport shop, gasoline station, or other retail outlet that has taken on boats as one of several sidelines. One should not overlook as possible sources Sears, Roebuck and Montgomery Ward, whose boats are generally well constructed and reasonably priced and whose policy of backing up their merchandise in most instances is well established. In general, however, no beginner should buy a boat and motor combination without trying it out in the water—unless he can try an almost identical combination that belongs to a friend or a dealer. The risk of choosing unwisely is such that it will be wise to take all reasonable precautions, and spend some time before finally deciding on a type and make.

A note about the ratings

There are several reasons why boats cannot be rated as definitively as certain other products. First, as we have already noted, the buyer is more likely to be disappointed by buying a type unsuited to his needs than by buying a slightly inferior boat of the right type. Hence, a careful analysis of his needs in terms of the factors mentioned in the preceding pages will be more useful to him than too close reliance on the ratings that follow. Second, because boats are currently being built by hundreds of small manufacturers in all parts of the country, no set of ratings could include enough makes and models to suit all needs. It is quite possible that a local carpenter following a professional set of plans and working in his spare time can produce an excellent hull at a reasonable price and sell it largely by word of mouth advertising. The reputation of such a hull is unlikely to extend beyond a fifty-mile radius from its origin. Third, boat transportation, by truck or rail freight, is so expensive that a boat considered a good buy in one part of the country may be prohibitively expensive in another part. The ratings that follow (alphanumeric, within groups) should therefore be regarded as helpful rather than comprehensive, and subject to the limitations just outlined.

Boats under 12 feet

These are generally suited for use with outboard motor (not more than 3 horsepower) or oars, by two adults or one adult and two children in sheltered waters and for use as tenders for larger craft.

A. Recommended

Colonial Pram (Worthington Products, Inc., 441 Lexington Ave., N.Y.C.) \$85 unpainted, f.o.b. Lindenhurst, L.I., N.Y. Weight, 65 lb. A well-designed and carefully constructed 8-ft. pram made of brass-fastened "mahogany plywood."

B. Intermediate

Sears (Sears-Roebuck's Cat. No. 6-M6277) \$54.95 f.o.b. mail-order house. 8-ft. pram. Weight, 87 lb. Design and construction are judged not as good as the *Colonial Pram*.

Boats 12 to 15 feet

Outboard boats in this size range are available in high-speed models for water skiing and commuting and in "utility" models for general purposes (see text). Sailboats are for "day sailing" only. Neither type is generally suitable for open waters such as the Great Lakes, or along unprotected coastlines.

A. Recommended

HIGH-SPEED OUTBOARDS

Flier Cartop, Model QXH (Penn Yan Boats, Inc., Penn Yan, N.Y.) \$310 f.o.b. Penn Yan, packed for shipment. 12 ft. The 97-lb. weight of this model makes it perform well with motors in the lower horsepower ranges and likewise makes it suitable for cartop transportation. The "Plastom" construction is essentially that of a canoe except that a plastic is used in place of the exterior canvas. Finish and durability are excellent. The boat is available in a 14-ft. model.

Surf-Rider, Model 714 (Dunphy Boat Corp., Oshkosh, Wis.) \$705 f.o.b. Oshkosh, packed for shipment. A 14½-ft. boat of good capacity (33 in. deep and 70 in. beam). Marine plywood, lapstrake construction. Can also be used as a "utility" boat.

UTILITY OUTBOARD

Elgin (Sears-Roebuck's Cat. No. 6-M6830) \$353 f.o.b. mail-order house. A 14-ft. open boat. *Fiberglas* construction. Weight, 175 lb. A sensible cockpit layout makes the most of the available space. Appearance would be judged by some to be lacking in style.

SAILING CRAFT

Tech Dinghy (American Boatbuilding Corp., East Greenwich, R.I.) \$774 f.o.b. East Greenwich, less

sails. Shipping container, \$35. Sail: cotton, \$49; *Dacron*, \$114. *Fiberglas* construction. 12½-ft. length. An excellent boat for children learning to sail, since it is a standard design for intercollegiate racing. Performs well, considering that it is a cat rig rather than a sloop.

B. Intermediate

UTILITY OUTBOARD

Deep C (Aluma Craft Boat Co., Minneapolis 13) \$690 f.o.b. Minneapolis, plus \$12 packing charge. Windshield and canopy optional extras. A 15-ft. aluminum hull of fairly good capacity. Would warrant an *A* rating except for limitations of aluminum hull (see text) and the fact that the manufacturer's warranty (actual guarantee is fastened to each boat sold by authorized dealers) requires the owner to return the hull (276 lb.) to factory in Minneapolis, prepaid.

Boats 16 to 22 feet

Boats in this size range are available in open day-sailing models and decked models for cruising. The sail cruisers are suited to limited offshore work but the outboard cruisers are not safe in open waters. The day-sailing models can be used for cruising by the addition of sleeping bags, air mattresses, and other needed camping gear.

A. Recommended

DAY SAILERS

Day Sailer (George D. O'Day Associates, Inc., Boston 16) \$1300 f.o.b. Boston, without sails. A 16½-ft. sloop of *Fiberglas* construction. An excellent design that can accommodate six adults for day sailing, and two for cruising with the addition of sleeping bags and cockpit tent.

Lyman (Lyman Boat Works, Sandusky, Ohio) \$850 f.o.b. Sandusky. Windshield and canopy extra. A 17-ft. outboard. A roomy, sturdy marine plywood, lapstrake hull well finished in all details.

CRUISERS

Hummel Standard (Distributed by R. Graves Corp., Brooklyn 34, N.Y.) \$2099 f.o.b. Port of Entry. "Mahogany plywood" hull claimed to sleep five persons, but fifth bunk is substandard and would be deficient in comfort and privacy. This German import reflects an ingenuity of design unmatched by its American outboard counterparts. An unusual arrangement of two removable "hardtops" (extra cost) makes the hull unusually adaptable for day sailing, and cruising accommodations for four are comfortable and intelligently arranged.

Maraudeur (Nautica Corp., P.O. Box 26, Paramus, N.J.) \$1175 f.o.b. Paramus. *Dacron* sails, \$175. Made in France. A 16-ft. sloop accommodating two persons in closed cabin. A combination keel and centerboard provides good performance and leaves the cabin free of the usual centerboard trunk. Molded plywood construction.

Nursing bottles and nipples

This article concludes a discussion begun in the March 1959 issue of Consumer Bulletin. The preliminary report in March discussed briefly the relative merits of nursing bottles made from glass and polyethylene plastic.

THE usual goal of a mother (or father) using a baby bottle is, of course, to get the contents out of the bottle and into the baby with the least possible wear and tear on the infant and parent, other members of the household, and neighbors who may be within earshot of the hungry child. This apparently simple objective is not always easily accomplished. To some, new parents in particular, it may seem that it is *never* easily accomplished. This, however, is an exaggeration.

To get liquid *out* of a nursing bottle, it is necessary to allow air to get *in*. Otherwise the air pressure inside the bottle will go down to the extent that the normal air pressure outside will prevent the fluid from leaving the bottle.

A type of baby bottle that was once common but is now more or less out of style has a narrow neck over which the base of a nipple is slipped. In such an assembly, with most nipples, the only openings are the holes in the end of the nipple. Thus the air to replace milk or "formula" has to enter through the same holes by which the milk flows out. As a baby takes milk out of such an assembly, the nipple tends to collapse and the flow of milk stops unless air can get into the bottle through the holes that are, of course, inside the infant's mouth. Some air can come from the baby's pharynx, a chamber at the back of the mouth, but the ultimate source is outside, and much of the needed air must pass the baby's lips. Therefore, the seal between lips and nipple is broken at fairly frequent intervals and there are inrushes of air.

It is argued by some that this periodic inrush of air into the baby's mouth tends to encourage the child to swallow air. Bubbles of air collect in the stomach, cause pain to the infant, and necessitate stopping the feeding to "burp" the baby. During almost every feeding of an infant, some air is swallowed, and "bringing up the bubble" once after the feeding is finished is a normal and expected procedure. On the other hand, swallowing of excessive amounts of air can lead to

too frequent interruptions of the feeding. The *Davol Anti-Colic* nipple is typical of several devices designed to admit air to the nursing bottle through an access hole that is outside the baby's mouth. This may reduce the amount of air swallowed during feeding, but not at other times, as the baby sucks a finger or toy. In any case, swallowed air is but one of the possible causes of gastrointestinal distress often called "colic."

The *Davol Anti-Colic* nipple is designed to be used with a wide-mouth nursing bottle, having an outside diameter at the top of about $1\frac{1}{2}$ inches. (Bottles with this size opening are the commonest type today.) There is a very small hole near the rim of the flange at the base of the nipple, in a relatively thin section of the rubber. This hole is so designed and so located that, in conjunction with the underside of the plastic cap that holds the nipple on the bottle, it constitutes a sort of valve whereby air can get into the bottle as the fluid contents are withdrawn. As a baby feeds from a bottle equipped with such a nipple, a stream of air bubbles may be seen entering the bottle. The presence or absence of the air bubbles shows whether or not the infant is getting his nourishment. Especially to an inexperienced parent, this is a very useful indicator.

The proper operation of the *Davol Anti-Colic* nipple is dependent upon the little hole through which air enters. If this becomes obstructed by a curd of milk or closes up after a time because of swelling of the rubber from which the nipple is made, the only way for air to get into the bottle will be through the feeding holes—just as with the simple narrow-mouth bottle and nipple previously described. Thus it is important to keep the air-valve hole clean, and the nipple should be discarded if the hole becomes per-



Typical wide-mouth and narrow-mouth nurs-ers. The wide-mouth shape (left) is the one in more common use today.

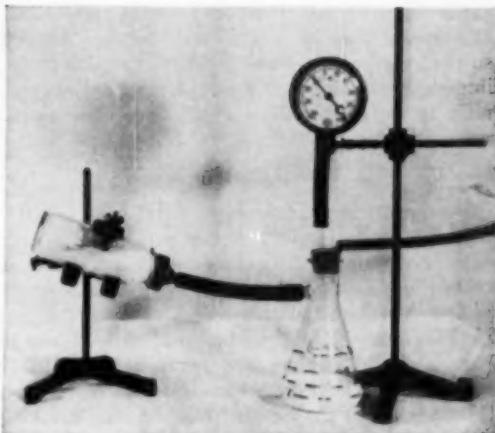
manently closed from swelling of the rubber. A closed valve hole can be reopened with a hot needle, but this is a tricky job, and the hole is likely to be too big afterwards. In any case, a nipple that has seen enough service for the valve hole to become closed by swelling rubber is probably a likely candidate for replacement for other reasons also.

The *Evenflo* nipple is somewhat similar in operation to the *Davol Anti-Colic*. There are *two* tiny valve holes, only one of which seems to function at a time, so that proper operation can continue even if one hole becomes clogged.

Recently *Davol* has come on the market with a somewhat different nipple, the *Davol Feed-Rite*. This has the same single air-valve hole as the maker's *Anti-Colic* nipple, but otherwise is different in several respects. The *Feed-Rite* is undercut near its base to form a groove which locks the nipple into the bottle cap, whereas the older *Anti-Colic* nipple has smooth sides which fit through the hole in the cap but do not lock in place. The tighter fitting *Feed-Rite* has three molded indentations or grooves down its sides which allow air to get to the air-valve hole. The indentations extend upward fairly near the tip of the nipple. It is judged that this may make it more difficult for an infant to maintain a tight seal around the nipple with his lips. Differences in details of construction make the newer *Davol* nipple more pliable especially near its base than the older type. Samples of the *Davol Feed-Rite* nipples were obtained comparatively recently by Consumers' Research and have not been observed in use as much as the older style of *Davol* nipple.

As one watches the *Evenflo* or either *Davol* nipple in action, the steady flow of air bubbles may seem quite mysterious because there seems to be no path whereby the air can get under the rim of the plastic cap to the valve hole. Only on fairly close examination of the plastic cap does it become apparent that there is a thin raised ring near the outer edge of the underside of the plastic cap, near the threads by which the cap is screwed to the bottle. This ring serves to hold apart the under surface of the cap and the upper surface of the nipple flange, allowing air to pass between them and to reach the small valve hole.

By screwing the cap down very tightly, one can usually force its underside firmly enough against the nipple flange to close off air from the valve hole. Then, as the cap is gradually loosened, air can enter in increasing amounts. Thus, by adjusting the tightness of the cap, the mother who uses an *Evenflo* or *Davol* nurser has some degree of control over the speed of feeding, though less than one might suppose. Tightening the cap does tend to shut off the air intake but



This setup was used to observe the operation of various nursing assemblies. (The tube going off to the right leads to a vacuum pump. Milk drawn from the nurser was collected in the flask.) Because there was no simulation of a baby's jaw and tongue movements, the device pictured by no means provided a complete representation of a child's use of a nursing bottle, but it did serve to make possible in the laboratory close observation and study of the valve action for admitting air and thus releasing the milk.

doesn't stop the feeding; it just makes it a little more difficult and promotes the swallowing of air. Loosening the cap permits the valve action to work, but not much loosening is required to admit air as freely as the valve can handle it. If the flow of liquid is still too slow, the trouble is probably that the feeding holes have become clogged or are too small.

Thus far our attention has been directed almost entirely to the bottle and especially the nipple, but now let us look at the other half of the feeding operation—the infant himself and what he is doing to get his food. Many might suppose that he merely sucks in the milk. To recognize that there is more to it than this, just watch the busy little mouth at work and compare it with the mouth of someone drawing in liquid by suction, say a teenager absorbing soda through a straw.

X-ray motion picture studies of infants feeding show, as one might well expect from watching the jaw action of a baby, that a significant part of the liquid extracted by a baby from a bottle is obtained by his squeezing of the nipple. As the infant's jaws close, the gums tend to squeeze the bottom of the nipple, preventing or impeding passage of its contents back into the bottle, and the tongue then compresses the tip portion of the nipple, forcing the milk into the baby's mouth. As the pressure of jaws and tongue relax, there is some sucking action which tends to aid the elasticity of the nipple in bringing the latter back to its original shape and allowing more milk to flow into it for the next squeezing part of the cycle.

For this series of steps to work effectively, the nipple must be soft enough, both at its base so that the baby's jaws can shut it sufficiently to impede backflow, and near the tip to permit the milk to be squeezed out. Of the three nipples we have been discussing, the *Davol Anti-Colic* is noticeably less pliable at the base than either the *Evenflo* or *Davol's new Feed-Rite*. When the three nipples are manipulated by the fingers so as to simulate an infant's mouth actions (but without any suction), the amount of liquid expressed from the *Anti-Colic* is less than from the others.

The *Nursmatic* nurser comes equipped with a *Davol Anti-Colic* nipple which has slipped into its base a metal device, the *Insta-Valve*. This is a sort of check valve which impedes the flow of milk back into the bottle from the nipple. Thus it tends to perform the same function in the feeding process, as do the baby's gums when they close on the base of the nipple. However, the *Insta-Valve* is actuated by the beginning of the backflow which it is designed to shut off, and the valve action functions effectively only if the squeezing of the nipple tip is fairly quick and vigorous. In use, the *Nursmatic* nipple (or the identical *Anti-Colic*) gave out milk easier with the *Insta-Valve* in place than without it, provided the squeezing action was sufficiently vigorous. But the *Evenflo* and *Davol Feed-Rite* nipples, softer at their bases and thus permitting easier closure by the force of the baby's jaws, gave equivalent and sometimes even better results without a special valve and without requiring such vigorous action.

Just as this issue of *CONSUMER BULLETIN* was going to press, samples were obtained of a new kind of nipple, the *Evenflo Preemie*. The nipple was softer and more pliable than the others, both near its base and at the tip. Although there was no opportunity to test it in use, we are inclined to believe, on the basis of our examination and a very brief laboratory trial, that the *Preemie*, as claimed, would require less effort on the child's part to draw the liquid from a nursing bottle. Thus the *Preemie* might be especially suitable for a premature or new-born infant, or any baby that has difficulty in getting his food from the bottle in a reasonable length of time. The *Preemie* was similar in appearance to the standard *Evenflo* nipple, except that it was reddish in color while the standard *Evenflo* was light brown or amber. The *Preemie* also had a raised rim around the flange at its base—presumably to aid in keeping the passage open to the air-valve holes.

Which nipple is best for a particular baby depends on many factors, including shape of the mouth, the relative vigor of jaw and tongue ac-

tions, and the amount of suction developed during the feeding process. It is hoped that the discussion given here will assist the parent to observe the feeding process with more insight, and thereby to be in a better position to select the best nurser for a given baby. Of course, it should be kept in mind that, for many babies, *any* of the nurseries mentioned will work satisfactorily.

The listings below are in alphabetical order within the *A*- and *B*-rated groups.

A. Recommended

Davol Feed-Rite (Davol Rubber Co., Providence 2, R. I.) The *Feed-Rite* nipple is readily distinguished from the same maker's *Anti-Colic* by the grooves down its sides; also the name is molded in its base. *Davol* markets a variety of wide-mouth nurseries comprising bottles of plastic or glass with nipples, caps, seals, and other accessories. The company is apparently changing over some of its nurseries from the *Anti-Colic* to the *Feed-Rite* nipple. Some *Davol* complete nurseries are called *Feed-Rite* but nevertheless do *not* include the *Feed-Rite* nipple, and the same number has been used by *Davol* to identify nurseries with the two different styles of nipples. The only sure way to tell which type nipple is furnished on a particular nurser in your druggist's stock is to look at the nipple itself. The *Feed-Rite* nipple, also available separately at 3 for 35 cents, may be used with many different wide-mouth bottles.

Evenflo (Pyramid Rubber Co., Ravenna, Ohio) A varied line of nurseries and parts includes, typically, a complete 8-oz. nurser with bottle of *Pyrex* glass at 40 cents, a complete nurser with bottle of polyethylene plastic at 39 cents, and nipples separately at 10 cents each. (See text for discussion of the new *Evenflo Preemie* nipple, also sold at 10 cents.)

B. Intermediate

Davol Anti-Colic (Davol Rubber Co.) See text for differences between this maker's *Feed-Rite* and *Anti-Colic* nipples, and listing of *Davol Feed-Rite* above under *A. Recommended* for further comments. *Anti-Colic* nipples, separately, 10 cents each.

Nursmatic (Nursmatic Corp., 4 W. Woodstock St., Crystal Lake, Ill.) Complete 8-oz. nurser, 89 cents, includes *Insta-Valve*, nipple, collar, hood, and bottle of *Duraglas* glass. See text for discussion of the *Insta-Valve*.

* * *

Perma Nurser (Vantines, Inc., New York 11) Complete 8-oz. nurser with plastic bottle and *Perma Nurser* nipple, 39 cents. Not found on the market recently, but may be still available in some stores. Under heat for sterilization, the cap became somewhat deformed and would not screw on and off readily. The newest *Perma Nurser*, not available when samples for current test were purchased, are equipped with *Davol* caps and *Anti-Colic* nipples.



Above—the common mole.

At the right—Runways made by moles in a lawn in an eastern state.



Control of the common mole

THERE are five groups of true moles in the United States. Two of these, the large Townsend mole and the rarer Gibbs' mole, occur in the Pacific coast states. In the eastern part of the United States, there are common moles, star-nosed moles, and the rarer Brewers' moles. This information relates primarily to the common mole but most sections of the discussion that follows also apply to all moles. Testing of poison baits by the U.S. Fish and Wildlife Service, however, has been chiefly on the common mole.

Moles might be considered beneficial in uncultivated fields and wasteland for their runways aerate the soil and they consume many harmful insect species. However, they may become a pest as they invade lawns, seedbeds, gardens, golf courses, and nurseries. Objectionable ridges or mounds will be made in turf areas, small plants may be upheaved, and their runways near plants may cause such plants to dry out and die. Moles may attack directly some bulbs or plants and eat some vegetable matter, but most of this type of injury is usually done by field mice that use the same runways.

Moles live mostly underground. They lack external eyes and ears. Their short, stout front legs and claws facilitate digging. They are active all year, making runways near the surface during the cooler and wetter months but having deeper runways during the dry months or in freezing weather conditions. Their principal foods are earthworms and insects, mainly the larvae.

One method of mole control is to eliminate their food, provided there are less valuable areas near by to which they can move and not cause damage. There are many insecticides to kill earthworms and insects in the lawn and garden. The chemicals are available as dusts, granules, or sprays. The more popular ones being used are dieldrin and chlordane. Most of the dusts and granules will require a dilution with lime, sand, or fertilizer,

and the use of a fertilizer spreader to obtain an even distribution over the lawn. Wettable powders and emulsifiable concentrates will call for the use of a sprayer. State Agricultural Experiment Stations should be consulted for local recommendations. Great care must, of course, be taken in the use of toxic pest-control chemicals, and especially to keep them from any possible contact with food, and from access by children.

A single application of one of these insecticides may last for several years. A mole might make an exploratory runway into the insect-sterile area, but such excavations will not be extensive.

Another method for controlling moles is the use of a special trap. There are various types sold in garden supply and hardware stores such as the harpoon type, the choker-loop, and the scissors-jaw. Be sure to set the trap in an active runway. Pressing down short sections of the runways with one's foot for a few successive days will determine which runways are raised daily. Follow the manufacturer's directions for using the different mole traps. One or two mole traps kept in constant operation will clear an average home area.

Moles have been difficult animals to poison, for they prefer live food. However, two types of poisoned bait have given excellent results in many cases. One bait is purple-dyed peanuts while the other is a pelleted cereal mixture. Both materials are poisoned with thallium sulfate.

These baits are most effective during the spring and fall months when mole runways are near the surface, especially a day or two after a heavy rain. Two or three pieces of bait are placed every four feet by punching a small hole into the runway with a pointed stick and then transferring the bait with a spoon into these holes. If the soil is damp, press the holes closed, but if the soil is dry, place a small stone or other object over the holes. Do not let loose soil fall upon the bait. These baits are effective for mice as well as for moles.



Setting the harpoon trap. A number of sharp prongs poised above the runway are released and move forcefully downward when the mole raises the depressed soil under the trigger pan.

Thallium sulfate is highly toxic, a deadly poison. Do not handle the bait with the hands. Keep the can of bait away from children, and store it safely, in a locked cabinet or drawer. Burn or bury the few dead or dying moles that may be found on the surface.

The peanut bait has the trade name of *Mo-Go* and is made by O. E. Linck Co., Inc., Valley Rd., Clifton, N.J. The pelleted cereal bait has the trade name of *Orco* and is made by Oregon Rodent Control Outfitters, P.O. Box 361, Eugene, Oreg.

If the thallium-poisoned baits cannot be obtained locally, write the manufacturer as to distributors near you.

* * *

Consumers' Research gratefully acknowledges the generous assistance of Ernest M. Mills, Assistant District Agent, Region 5, of the Fish and Wildlife Service of the United States Department of the Interior who provided the information and the illustrations in this article.

Greater safety in use of power lawn mowers

SELF-PROPELLED MOWERS are a temptation to many people who do not wish to exert the effort to push the mower around the yard, particularly if the yard has areas with considerable slope. Nevertheless it is important that no one should buy a self-propelled mower of the rotary (whirling blade) type without recognizing that it is a far more dangerous tool than a mower that must be pushed. The danger is particularly great if the operator should momentarily lose control. A self-propelled mower is more likely to be overturned; overturning, of course, can imply very great danger to anyone near by. Self propulsion adds about \$30 to the price of a rotary mower and reduces the power available to the cutting blades.

* * *

The following simple suggestions to help achieve a degree of safety in use of power mowers are quoted from a Safety Code leaflet of the Lawn Mower Institute, Washington, D.C.

1. **Start safely.** Stand firmly. Make sure your feet are in a safe place.
2. **Keep in step** with your mower for perfect control. If you lag behind or let it pull you, you won't be in full command of the machine. Don't run.
3. Learn how to **disengage the clutch** or stop the motor quickly in case of any emergency. Stop the motor whenever you leave the mower.
4. **Keep the way clear** of little tots and pets. Don't let them play around the mower while it is in operation.
5. **Always be sure** of your footing and balance when mowing on inclines. The steeper the incline the more care required.
6. **Inspect the lawn** that is to be mowed before the

mowing begins. Clear the lawn of all stones, wire, and other debris.

7. **When grass is wet** or when it is raining, it is best not to use an electric power mower unless you are certain the entire mower and the cord are in perfect order.

8. **Disconnect the spark plug wire** whenever you want to work on the underside of a mower. Tip mower over by means of the handle. Don't reach under the deck, chain guards, or belt guards of any mower (with the engine running). Keep hands, feet, and clothing away from any moving parts. Never attempt removal of any objects from the mower until the rotor is stopped completely.

9. **Keep fuel stored** in an approved tightly sealed container.

10. **Respect your power mower** and teach this respect to the younger members of the family who use it. Teach them, too, these simple safety suggestions.

11. **Excessive cutting blade speed** is dangerous—do not overspeed the engine by tampering with the governor.

* * *

Hazards of reel mowers

Reel mowers are much less dangerous to users and persons near by than whirling blade, vertical shaft mowers, but reel mowers, too, can cause serious injury. Especially hazardous for anyone using a reel-type mower is any attempt to remove small twigs or bits of wire or other material that may have caught between the bedknife and the reel blades. This must never be attempted while the engine is running. Bear in mind that throwing out the clutch is not sufficient, as something may happen that will make the clutch re-engage, and if that should happen, the operator may lose several fingers in the twinkling of an eye.

Tubeless tires on passenger cars— are they suitable and safe for recapping?

BY ANDREW J. WHITE, DIRECTOR MOTOR VEHICLE RESEARCH

THE first tubeless tires, which appeared on the market in 1954, proved to be much more troublesome to their owners than the previous type of tire with an inner tube. Unfortunately, tubeless tire troubles, very serious for two or three years, still persist. Over six percent of the new tubeless tires sold are returned to the dealers for adjustment; failures are obviously much higher. The tubeless tire is much the same as a tire using an inner tube, except for the fact that the tubeless tire has an inner liner of thin rubber of a special kind cemented to the inside of the tire casing to retain the air in the tire. Sealing of the air along the line of contact of the tire with the rim is provided for by a series of slightly raised rings molded into the rubber in the bead zone of the tire.

The inner liner of a tubeless tire is much thinner than inner tube stock and will often allow air to pass through. The problem of preventing the escape of air through these liners has not been solved completely to date, though some tubeless tires have a very satisfactory degree of air-retaining ability.

Ample proof that something is wrong in respect to air-retention can be found in the appearance of a new *Firestone* tire with a multi-layer liner, which has four layers of rubber cemented together. The theory behind this new liner is that if one or two of the layers leak, the air will be retained by the next layer.

The main reason why the usual tubeless tire fails is that when the air seeps through the liner (the innermost wall of the casing), it forms a sort of bubble somewhere in the tire structure. This bubble increases in size, causing a separation of the plies of the tire, and ultimate failure. These ply separations may occur at any of various places (bead area, sidewall, or crown) on the various makes of tires, and some tire manufacturers have had extreme difficulty in this respect.

The penetration of a nail into a tubeless tire to a point where the liner is pierced is another means by which air seepage into the plies of a tire can start, unless a satisfactory repair is made promptly. Frequently service stations merely remove the nail. Thereafter, while no loss of air may be evident, tire flexing permits a small amount of air to seep into the body of the tire at the point where the nail penetrated, and separation of plies begins.

Even though no penetration of the tire struc-

ture may occur, the liner, being an integral part of the tubeless tire casing, must move with it. Relative movements of the liner and casing cause fatigue that may ultimately allow seepage of air through the liner into the tire cord sections. Once such seepage starts, it is progressive, until the separation becomes so great that the tire fails. Some manufacturers applied a heavy mastic inside the tire to prevent seepage of air but found that the mastic gathered into one or more lumps or balls, causing serious unbalance in the tire. This type of construction is now more or less obsolete, but with heavy costs to the consumer for the unsuccessful experiment.

There is ample evidence to show that tubeless tires have been in some ways much less satisfactory than tires with inner tubes. Among such evidence is the difficulty tire retreaders are having in finding acceptable used tubeless tires for retreading. (Actually most passenger car tires nowadays are not retreaded but given what is called a "full recap.") The retreading industry employs several methods to determine the suitability of used tubeless tires for recapping, including infra-red heat lamps to reveal the ply areas penetrated by air and therefore separated, air injection into suspected areas of the tire, and liquid solutions in combination with air injected through hypodermic needles. Retreaders have tried to vent tires with electric drills and venting needles, but with little success. Some retreaders even think that the tubeless tires represent a "planned obsolescence" by tire makers, with the idea of limiting tire life to one tread only.

The rejections of tubeless tires by reputable retreaders in selecting tires suitable for recapping, expressed as percentages, indicate the poor condition of tubeless tires made in past years when they have reached the stage for recapping.

1. Field inspection at point of purchase. This inspection is made by casing buyers in the field with many years of experience. Rejected: 6 percent.
2. Rejected on visual inspection of selected casings made when the field-inspected casings are delivered to the retreading plant, 5 percent.
3. Rejected on use of the infra-red heat lamp, 5 percent.
4. Rejected after 125 pounds per square inch air injection, 35 percent.
5. Rejected during recapping process, 6 percent.

Importance of recapped tires should not be overestimated

Retreaded or recapped tires are a very important part of the total tire business in the U.S. This is evident from the fact that, according to one estimate, about one quarter of the tires in use on automobiles are recaps. An automotive trade journal reported that in 1958, sales were expected to be in the ratio of one recapped tire for every two new tires. This would mean that about one third of the tires bought by consumers are recaps. A large proportion of snow tires are recaps, for new snow tires are expensive and consumers who drive conservatively have found used ones do well enough at the low speeds of winter driving.

6. Rejected at end of recapping operation, 5 percent.

Only the best and largest recapping firms would use all six of these techniques. In the interest of economy, most recappers would use only one or two of the available methods for checking the condition of the carcasses they use.

Recappers have found "grade A" casings in the 14-inch size so scarce that some may at times accept almost anything to recap in this size.

Many of the inner tubes now being manufactured are being used in tubeless tires. Motor Vehicle Research considers that few tubeless tires are safe after retreading unless the user buys inner tubes for them. The retreading industry, too, is well aware of this, but seems loath to advise their customers to use tubes in recapped tubeless tires, probably because the price of the retreading job plus the price of a tube would be nearly equal to or more than the price of a new low-priced tire. (New low-priced tires are often of very good quality—see CONSUMER BULLETIN, May 1958.) But drivers who buy retreaded tires are paying for their failure to buy and install tubes, in premature failures of recapped tubeless tires, and in the costs of getting adjustments. If the retread industry does not plainly advise the

use of tubes in recapped tires, state legislatures may take action to outlaw retreading. One bill to outlaw retreading and regrooving was recently introduced in Delaware, but was killed before it reached the floor of the legislative body; several more bills are being drafted in other states which might become law.

Firestone retread shops no longer guarantee the carcass or cord body of any tire retreaded or recapped by them. This is a clear case of recognition by a tire manufacturer that tires for retreading or recapping cannot be guaranteed from a carcass standpoint because of the number of uncontrollable variables involved.

Over 15 percent of recapped tubeless tires when used without tubes are returned by dissatisfied customers for adjustments, and this figure would be a great deal higher if all failures ended as complaints to the retreader and were not viewed as "just a tire failure" by motorists.

The following suggestions will be helpful to the consumer who wishes to obtain satisfactory service life from his tires:

1. It would appear that the consumer can best be served with a tube-type tire until better tubeless tires are created, tested, and proven. A new tire, of the type meant for an inner tube, and a tube to go with it sell for about the same price as a tubeless tire. In selling a tubeless tire, the manufacturer in effect gets the price of a tube without having to supply it.

2. The use of a tube should be mandatory when a tubeless tire is retreaded.

3. Avoid the purchase of any extra-high-priced premium or special feature tire offered. The features as a rule are just a way of stepping up the price, and the special grade tires may often be less desirable than the maker's regular grade that is put on new cars by automobile manufacturers.

4. Demand a quick and fair adjustment when a tire fails. Remember that a tire adjustment policy is only as good as the *dealer* from whom the tire is purchased. The manufacturer usually leaves this problem to the dealer, and corporate prestige advertising will not assure you a favorable adjustment on a poorly made or defective tire.

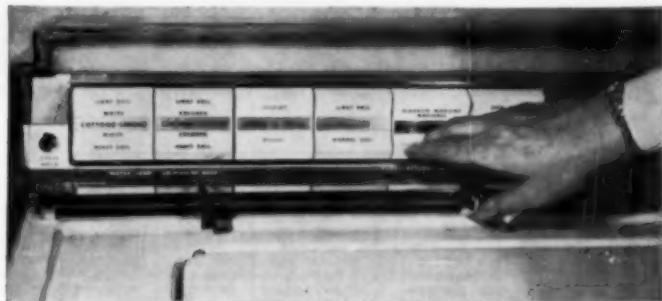
5. If you have a tire recapped, or buy a recapped tire, select a firm with years of experience and a reputation for quality work. There are many recappers who do good work. They will recommend the use of a tube in a recapped tubeless tire.

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Automatic washing machines



IT HAS BEEN SAID that today's housewife must be a chemist to understand how to use the variety of synthetic detergents and the numerous laundry "additives" that are available to her to help with her cleaning and laundry operations. The lady of the house has, for the most part, met this challenge quite courageously, with a reasonable degree of success. Now, however, she faces another challenge in today's automatic washer. The home-maker almost needs engineering training to help her know if the machine is doing what it is supposed to do and to help her to keep her washer doing its job and doing it economically.

The manufacturers have indeed kept the housewife in mind in designing the new washing machines, for these machines have been made especially for her. One might well ask in what way the designers and engineers had her in mind. The new machines, while they may be more "automatic," may confuse her rather than arouse her enthusiasm.

There was a time when one bought a washing machine because it would take over the physical burden of washing clothes by hand. Then, the manufacturers improved the washing action, to produce a cleaner wash. Today, the consumer can choose from among such optional devices as the *Dispensomat* on the *Norge*, which makes it possible to load the machine with the detergent, bleach, water softener, and fabric conditioner when the clothes are added, each to be dispensed at the appropriate time; the *Built-in Bleach Dispenser* on the *Maytag*, which delays the addition of the bleach for a minute or so to help produce a "whiter" wash; the *Program Computer* on the *Westinghouse* which, among other things, permits the washing of blankets without agitation or prolonged spinning, with little more effort than simply setting a dial and operating the starting switch. Then there are those machines which "make the decisions" as to temperature of wash and rinse waters as well as speed and time of agitation and spin; all that the operator needs to do is sort the clothes and select the appropriate

What will today's washing machine do that yesterday's would not?

In general, it is "more automatic." It will introduce one or several chemicals and additives at appropriate phases of the cycle. It also offers the operator a wider choice of washing conditions with respect to temperature of water and speed of agitation and spin. The new machine will probably be used for smaller loads than earlier ones, and use more water. It will wash clothes about as well, maybe a little better.

cycle by push button or dial. Among these are *Easy*, *Frigidaire*, *General Electric*, *Hotpoint*, *Kenmore*, *Philco*, *RCA Whirlpool*, and *Westinghouse*.

With the *Norge*, not only does the *Dispensomat* mechanism permit loading the machine with a variety of powders and/or liquids at the same time the clothes are placed into the tub but the machine can be set to start its operation at any hour within the next 12 by means of a timer clock.

Maytag, with its delayed bleach dispenser, offers something new. It introduces bleach into the wash solution *after* the detergent has been dissolved and has had time to become mixed with the clothes. Recent studies indicate that, when a chlorine bleach is added to the wash about 5 or 6 minutes after the detergent, little of the optical bleach (fluorescent dye) in the detergent is destroyed by the bleach. Thus the washed clothes benefit from both the chlorine bleach and the super-white-dye "bleach" present in today's detergents. The result is whiter-looking clothes.

Besides the variety of methods used for introducing rinse additives into the tub at the proper time during the cycle, most machines are now equipped with filters to catch lint. The consumer

need not become too excited about this accessory. These filters do remove some lint, but they are effective only up to a point. None of them accomplishes complete removal of lint, and any

dark piece washed with white articles will still be marked by bits of lint or fuzz. The design of several machines is such that unless the tub is filled to overflowing the filtering device will not func-

AUTOMATIC W

Brand	Manufacturer's rated capacity, pounds	Recommended capacity as determined by test, pounds	Type of water level control, pressure or time	Time for regular cycle, minutes	Time for short cycle, minutes	Water used for regular cycle, gal.		Water left in clothes, % dry weight	Electricity used for regular cycle, watt-hr.
						hot	cold		
Easy	9	8	P	32	26	18	7	80	205
Frigidaire	9	8	T	33	24	19	14	65	210
General Electric	10	9	P	38	—	22	10	80	220
Hamilton	8-9	—	P	USE TESTS NOT MADE (SEE LISTING)					
Hotpoint	10	9	T	44	28	19	21	85	200
Kelvinator	9	8	T	31	21	19	10	75	185
Kenmore 80	10	9	P	36	23	19	13	80	260
Lady Kenmore	10	9	P	37	25	26	7	80	290
Maytag	Not given	8	P	35	—	24	10	75	200
Norge	8-9	7	P	38	23	25	18	75	185
Philco-Bendix	10	9	P	40	29	19	11	75	150
RCA Whirlpool	10	10	P	34	21	23	13	80	230
Speed Queen	8	8	T	34	20	21	16	75	270
Westinghouse	10	8	P	42	—	19	12	85	300

* Height given is to top of open lid.

† Cross lines in column indicate the various combinations of running conditions possible automatically by setting of the controls at the time of starting the machine cycle. The word "None" indicates the machine completed the cycle without a spin after the final rinse for wash-and-wear clothes to be drip dried.

** The Westinghouse had a single tumbling speed for washing and a single spin speed. In one of the two wash-and-wear cycles, the final spin was omitted.

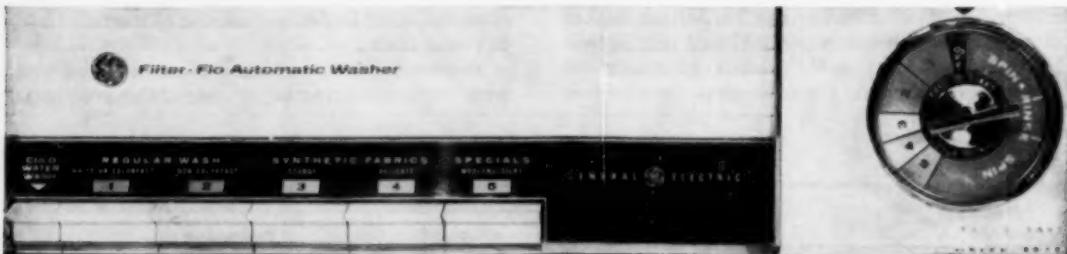
tion properly, or at all. Further, those makes on which the lint screen is positioned in place on the agitator shaft will present problems in loading and unloading the tub unless the screen is

removed, since it obstructs access to the tub. This can be a bother.

With today's increase in the use of "wash-and-wear" articles, a number of machines have special

WASHING MACHINES

Over-all dimensions, inches			Top or front loading	Water temperature selection		Speeds		Thermostatic inlet water valve	Brand
width	depth	height*		wash	rinse	wash	spin		
27	27	51	Top	Hot Medium Warm	Hot Medium Warm	Fast Slow	Fast Slow	yes	Easy
25	27	52	Top	Hot Warm	Warm Cold	Fast Slow	Fast Slow	no	Frigidaire
27	27	53	Top	Hot Warm Cold	Warm Cold	Fast Slow	Fast Slow	no	General Electric
26	27	52	Top	Hot Medium Warm Cold	Warm Cold	Fast Slow	Fast Slow	—	Hamilton
26	28	52	Top	Hot Warm Cold	Warm Cold	Fast Slow	Fast Slow	no	Hotpoint
27	29	52	Top	Hot Warm Cold	Warm Cold	Fast Slow	Fast Slow	yes	Kelvinator
29	26	53	Top	Hot Medium Warm Cold	Warm Cold	Fast Slow	Fast Slow	no	Kenmore 80
29	26	53	Top	Hot Medium Warm Cold	Warm Cold	Fast Slow	Fast Slow	yes	Lady Kenmore
26	28	52	Top	Hot Warm Cold	Warm Cold	Fast Slow	Fast Slow	yes	Maytag
26	27	52	Top	Hot Warm Cold	Warm Cold	Fast Slow	Fast Slow	no	Norge
27	27	53	Top	Hot Warm Cold	Warm Cold	Fast Slow	Fast Slow	no	Philco-Bendix
29	26	49	Top	Hot Medium Warm Cold	Warm Cold	Fast Slow	Fast Slow	no	RCA Whirlpool
26	29	52	Top	Hot Warm Cold	Warm Cold	Fast Slow	Fast None Slow	no	Speed Queen
30	29	44	Front	Hot Warm Cold	Warm Cold	**	**	no	Westinghouse



cycles for washing such items. Some of these cycles, but not all, have provision for cooling the warm wash water before drain and spin, thus minimizing the setting of wrinkles. Machines operating with a cooling-down action are *Frigidaire*, *Hotpoint*, *Kelvinator*, *Kenmore*, and *RCA Whirlpool*. In addition to having this cool-down fill, the *Westinghouse* had a setting in which the final fast spin was omitted and the *Speed Queen* could be set to omit all spins.

Somewhat on the order of automobile manufacturers, washing machine manufacturers are offering consumers a number of washer models ranging in price from about \$150 to \$400. As far as ability to wash clothes is concerned, the several models of machines of a given make differ little and frequently not at all. As with the automobile, the higher price represents "extras" in conveniences and appearance.

The temperature of the rinse water may vary with different machines and under different conditions. Machines are best equipped with water-inlet valves which operate on a thermostat principle to assure delivery of warm water at a temperature of about 100 degrees. In an attempt to save a few dollars, some makers do not equip their machines with such valves. In one machine in the tests conducted by Consumers' Research, the incoming water actually ran cool to the touch when the machine was set for warm. (There was an ample supply of hot water available.)

Servicing

With the increasing complexity of washing machines—and many consumers unquestionably encourage manufacturers to make them that way—it is getting to be more and more difficult to pro-

The General Electric washing machine has five push buttons plus one for a cold-water wash. After the operator selects the desired washing conditions and depresses the appropriate button, the machine will automatically deliver those conditions. For example, if button number three is depressed, the machine will wash in warm water, rinse in cold, agitate at normal or fast speed, and spin at slow speed.

duce one that will not have serious faults, either when new or after a reasonable period of use. With the increased complexity, there is, of course, a greatly increased probability of malfunctioning, or actual breakdown, and periods—which may extend to months, sometimes—during which the machine is out of service, plus the inevitable repair charges. (These may run to \$50, even \$100, occasionally.) Before considering the purchase of a washing machine (or indeed any major appliance), it would be wise to make a thorough check on the quality of service available locally and the charges that will be made for it. No product is any better than the service behind it, and no one will be satisfied with a machine whose serviceman runs up unreasonably high service charges for a little time, or for time ineffectively utilized. According to a recent survey, an average family can expect to spend in the neighborhood of \$150 annually to keep its home appliances running. This does not include any sum to cover the rather rapid depreciation of the appliances.

Front loading vs. top loading

The question is frequently asked—which of the two types of machine is better? The answer depends on the use that is made of the machine. The top-loading machine is first choice for the day-to-day laundering, consisting of towels, sheets, etc.

The front-loading machine, such as the new *Westinghouse*, while not the equal of the top-loading machines, does a satisfactory job of washing these standard loads. But the *Westinghouse* is outstanding in its ability to wash clothes which have been soiled heavily with sand or mud, a com-

men problem with clothes worn by farmers and men who work a great deal out of doors or work or hunt in the woods. Because of its revolving drum, the *Westinghouse* is also superior for washing such items as blankets, quilts, pillows, spreads, furniture slip covers, throw rugs, curtains, etc.

Safety

Consumers' Research has in the past been criticized and will again, no doubt in this instance, by some readers who have never suffered a washer accident, for taking a firm position where the consumer's safety is involved. Nevertheless, any automatic washing machine in this day and age so designed that one can reach into the tub while it is spinning at high speed is, in CR's opinion, a potential hazard of some seriousness. The result may be a bruised or broken hand, wrist, or arm, or even an arm dislocated at the shoulder socket.

Four machines, *General Electric*, *Hotpoint*, *Kelvinator*, and *Philco-Bendix*, do not provide the desirable quick braking of the spinning tub. The *General Electric*, *Hotpoint*, and *Kelvinator* tubs continued to spin for about 1 minute, 40 seconds, and 30 seconds, respectively; the *Philco-Bendix* tub continued to spin for 3 minutes.

Easy, GE, Hotpoint, Kelvinator, and Philco-Bendix spin with lids open.

Maytag can be made to spin with its lid open, although normally the spin will not occur with the lid open.

Speed Queen can readily spin with lid open (if started while lid is open). The lock on the sample tested was defective.

Damage to the clothes might possibly become a serious problem with some washing machines in homes where the water pressure is very low. Washing machines come equipped with one of two types of water-fill control mechanisms. One permits water to flow into the machine on a time

basis, and the other permits the flow to continue until a certain amount of water has entered the machine, based on the weight of the water or the pressure due to its depth in the tub. With the pressure-fill control, there is no problem caused by a low-pressure water supply; it will just take longer to fill the machine, and until the machine is filled to the proper level the agitator will not begin operating. With the time-fill control, only as much water as will flow in a given time will enter the machine and, if the pressure is low, the level of water when the agitator starts could be considerably below the proper working level. In such instances the clothes would be agitated in too little water and could thus be torn and ripped. This may not happen often, but when it does, the owner will have to decide whether to replace the torn clothing or replace the washing machine with one having a pressure-fill control.

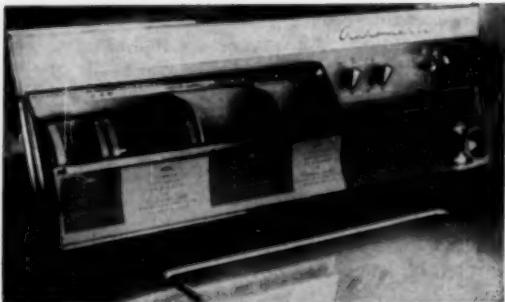
What to look for

A number of things that should be considered carefully before buying any washing machine to meet to best advantage the conditions under which the machine will be used are as follows:

1. Check the water pressure in the home; if the average pressure is much below 30 pounds per square inch, make sure the machine has a *pressure-fill* control instead of a *time-fill* control. In that way, one can be sure sufficient water will run into the tub.
2. Don't buy unless reliable and reasonably priced repair service is available in your area. (Servicemen's travel time comes high.)
3. Determine in advance the total quantity of water required to wash a full load, if water supply is scarce or expensive, or disposal of waste water is a problem.
4. Find out also how much hot water is required per load; if too great, a new water heater



By pushing any one of the 10 push buttons on the RCA Whirlpool, the machine will give the conditions corresponding to the cycle number shown in the table at the right. The table is a reproduction of that printed on the inside of the machine lid.



The dispensing of detergent, bleach, water softening chemical in the wash and rinse waters, and final rinse additive with the *Norge* is made quite simple by the compartments shown above.

of greater capacity may be needed, at considerable extra cost.

5. If clothes are to be dried in a clothes dryer, the amount of water left in the clothes after spinning in the washer is of particular importance, as it determines the cost of gas or electricity for finishing the drying job in the clothes dryer.

6. How long the washing machine takes to wash a load may be a matter of importance in some homes.

* * *

For those who may be interested in clothes dryers, reports on dryers, including ratings, were in the following CONSUMER BULLETINS: September 1958, electric models; October 1958, gas models. Washer-dryer combinations were reported in the March 1959 issue.

The brands listed appear alphabetically within each rating group. Prices given in the listings, except for the *Kenmore* machines, are factory-suggested list prices. The suds-saver system will add about \$20 to the price of the machine.

A. Recommended

Kenmore, Model 80 (Sears-Roebuck's Cat. No. 26-M9480W) \$265, plus shipping charges. Finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, plastic. Effectiveness in washing was good with loads up to 10 lb., but 10 lb. slightly overfilled the tub. Lack of cycle markings on dial made it difficult to adjust length of washing time, or to select, repeat, or eliminate portions of the cycle, except for an extra spin cycle setting. Had cool-down fill at end of wash period for wash-and-wear garments. Machine lacked instructions and description on lid for the operation of the 10 washing conditions possible with this machine. Panel light readily replaced (with *Lady Kenmore*, best of all tested in that respect).

Lady Kenmore (Sears-Roebuck's Cat. No. 26-M9495W) \$305, plus shipping. Finish: cabinet and tub, porcelain. Agitator, plastic. Similar in operation to *Kenmore 80*. The *Lady Kenmore* has no dial and is operated almost entirely by push buttons; thus with

this machine it will be even more difficult to select, repeat, or eliminate a particular operation than with the *Kenmore 80* and *RCA Whirlpool*. The *Lady Kenmore* has a rinse additive reservoir holding a 24-oz. supply from which a measured amount is dispensed into the tub each time the machine is used.

Maytag, Model 142B (The Maytag Co., Newton, Iowa) \$380. Finish: top, porcelain; lid, enamel; sides, enamel; tub, porcelain. Agitator, plastic. Effectiveness in washing was good with loads up to 8 lb. A good washing machine without the numerous features and gadgets offered on some.

Norge, Model AWW 502 (Norge Div. of Borg-Warner Corp., Chicago) \$400. Finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, plastic. Effectiveness in washing was good with loads up to 8 lb., but 8 lb. slightly overfilled the tub. Arrangements for adding powders and liquids at appropriate times during rinse cycle were judged best of all the machines tested. The *Norge* used a large amount of water, 43 gal. for a full load (an important consideration where water is scarce, expensive, or its disposal presents a problem). Relatively unsatisfactory instruction book.

RCA Whirlpool Imperial Mark XII, Model W5905800 (Sales No. FA960W00) (Whirlpool Corp., St. Joseph, Mich.) \$400. Finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, plastic. Effectiveness in washing was good with loads up to 10 lb., but 10 lb. slightly overfilled the tub. Lack of cycle markings on dial made it difficult to adjust length of washing time, or to select, repeat, or eliminate portions of the cycle. Had cool-down fill at end of wash period for wash-and-wear garments. Basic instructions appear on the washer lid, with a description of the function of each of the 10 buttons.

Speed Queen, Model A22 (Speed Queen, Ripon, Wis.) \$350. Finish: top and lid, porcelain; sides, enamel. Tub, stainless steel. Agitator, aluminum. Effectiveness in washing was good with loads up to 8 lb. A good washing machine offering a variety of washing conditions without numerous features and gadgets. Had cool-down fill for wash-and-wear. Has time-fill control, which may present problems where water pressure is low regularly or at times (e.g., with many private water-supply systems).

Westinghouse Laundromat, Model L-120 (Westinghouse Electric Corp., Mansfield, Ohio) \$400. Finish: enamel. Revolving drum, porcelain. Effectiveness in washing was somewhat below that of most agitator machines, but the *Laundromat* did a suitable job with loads up to 8 lb. Had cool-down fill for wash-and-wear. Revolving drum simplifies washing heavy and large items such as blankets, quilts, pillows, throw rugs, and furniture slip covers. Clothes washed in the *Westinghouse* became slightly twisted, but this fault was not judged to be serious. Replacement of light bulb, difficult.

* * *

Easy Golden Regent, Model ADK (Easy Laundry Appliance Div., The Murray Corp. of America, Syracuse) \$370. Finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, enameled aluminum. Effectiveness in washing was good with loads up to 9 lb., although 9 lb. slightly overfilled tub. Used a relatively

small amount of water. During time of filling with water, if lid is open, water bounces off the clothes and spray falls outside the tub. Spin speed noticeably reduced when load is off-balance. (The effect is to reduce the efficiency of removing water from the clothes.) The *Easy* has instructions on the lid with a description of the operation of each of the 4 dial settings.

Frigidaire Fabric-Master, Custom Imperial, Model WCI-59 (Frigidaire Div., General Motors Corp., 300 Taylor St., Dayton 1, Ohio) \$400. Finish: cabinet and tub, porcelain. Agitator, rubber and plastic. Effectiveness in washing was good with loads up to 8 lb. This machine did the best job of removing water from the clothes—an advantage in time, and cost of fuel, if clothes are to be dried in a clothes dryer—especially an electric dryer. Had cool-down fill for wash-and-wear. Required careful loading of clothes to minimize tangling. Has time-fill control (see text of article) which may present problems where the water pressure is low regularly or at times. Instructions appear on the lid, but no description of operation for the 5 positions of the selector.

B. Intermediate

General Electric, Model 1WA 95051W (General Electric Co., Appliance Park, Louisville, Ky.) \$380. Finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, plastic. Effectiveness in washing was good with loads up to 9 lb. During water fill period, if lid is open, water bounces from clothes and spray falls outside the tub. The *GE* machine was noisy in operation. Has no safety device on lid and no brake on tub (see text). Spin speed was noticeably reduced when load was off-balance. (See comment on *Easy*.) Has instructions and a description on the lid of the function of each of the 6 push buttons.

Hotpoint, Model LW990 (Hotpoint Co., Div. of General Electric Co., Chicago 44) \$400. Finish: cabinet and tub, porcelain. Agitator, plastic. Effectiveness in washing was good with loads up to 9 lb. Has time-fill control which may present a problem where water pressure is low regularly or at times. Had cool-down fill for wash-and-wear. The *Hotpoint* requires 44 minutes for the full cycle; this time is somewhat long. Although the machine claims to have provision for warm rinses, rinse water was actually 10 to 20 degrees cooler than in

other makes. Machine was noisy in operation. The *Hotpoint* has no safety device on lid, and no brake on tub to protect the user from the hazards inherent in a spinning tub; tub spins for about 40 seconds after end of cycle. The lid carries instructions and a description of the function of each of the 6 push buttons.

Kelvinator, Model WAJ 10 (Kelvinator Div., American Motors Corp., Detroit) \$350. Finish: top, porcelain; lid, porcelain and glass; sides, enamel; tub, porcelain. Agitator, plastic. Effectiveness in washing was good with loads up to 9 lb., although 9 lb. slightly overfilled tub. It was difficult to set dial at "start" position of cycle properly, and with time-fill control, the possibility of washing with insufficient water exists, perhaps even frequently. The design and the angle of the cycle control panel make it difficult for a fairly tall person to read. Had cool-down fill for wash-and-wear. Clothes washed in the *Kelvinator* were slightly tangled. The rinse dispenser was not fully satisfactory—it collected lint and it was found less effective when used with liquid conditioners than with powdered. The panel light was difficult to replace. Relatively unsatisfactory instruction book.

Philco-Bendix Automagic, Model W-298 (Philco Corp., Philadelphia) \$380. Finish: top and lid, porcelain; sides, enamel; tub, porcelain. Vibrator, rubber, metal, and plastic. Effectiveness in washing was good with loads up to 10 lb., but 10 lb. overfilled tub somewhat. This machine uses a new vibratory action instead of oscillating action for agitating the clothes. Selection of cycle and starting the machine requires pushing only a single button; at end of cycle, dial is reset automatically for the next run. This machine is capable of spinning at fast speed with a considerably off-balance load (desirable), but it lacks safety device on lid and brake on tub, which makes this machine a potential hazard in the home since it takes about 3 minutes for the tub to come to rest. Description of operations as set up by each button was shown on the button.

C. Not Recommended

Hamilton 400, Model 4T82 (Hamilton Mfg. Co., Two Rivers, Wis.) \$370. Finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, plastic. Failed electrical safety tests. Consumers' Research expects to run additional tests on another sample; the final rating will follow these further tests.

Diet in prevention of degenerative diseases

More care in choosing the things we eat can spare our arteries, and in other ways contribute to health and a longer life

"THE contemporary American diet, a peculiar by-product of civilization and the socio-economics of our culture, is pernicious to the cardiovascular system not only because of its excess in calories, lipids [fats and fat-like substances], and cholesterol (estimates indicate that the average American business and professional man ingests almost 60% of his total calories in the form of fats) but also

because it tends to be quite high in salt and in empty calories; i.e., calories derived from highly processed refined carbohydrates and fats (particularly animal fats and hydrogenated saturated vegetable fats), foods rich in energy but low in essential nutrients."

The above comment, quoted by permission of the J.A.M.A., The American Journal of Clinical

Nutrition, and Dr. L. N. Katz, is from a paper by Drs. L. N. Katz, J. Stamler, and R. Pick, in the Journal of the American Medical Association. The comment was quoted also in an important article on a related topic in The American Journal of Clinical Nutrition, May-June 1958, at page 330.

* * *

Through the kindness of the editor of the British Medical Journal, we are permitted to reprint further views of great interest on the problems of health in relation to food intake that appeared in an article by Dr. H. M. Sinclair, Vice President of Magdalen College, Oxford University, in England. Dr. Sinclair is one of the world's foremost authorities on the subject of nutrition and the relation of nutrition to health.

"I have for years carried on a lonely campaign against the overfeeding of children. In every animal in which the experiment has been made it has been shown that overfeeding during the period of growth and development shortens this period, so that adult size is reached earlier, and also shortens life. I believe this is a real danger in the U.S.A., and I believe we also must be careful lest by overfeeding children we hasten chronic degenerative diseases [such as heart disease, gall-bladder disease, cancer, peptic ulcer, asthma, rheumatoid arthritis]. Cow's milk is not a perfect food for man, mainly because of the composition of its fat, and I think we most seriously need research into the optimum diet for producing the optimum rate of growth of children. . . .

"My clinical teachers could not answer why the expectation of life in this country of the middle-aged man is hardly different from what it was at the beginning of this century or even a century ago. . . . a middle-aged man cannot expect to live more than four years longer than he could a century ago—and indeed in Scotland the expectation of life is now actually decreasing. . . .

"Research has indeed proved that deficiency of vitamin B₆ in lower animals can produce caries [tooth decay], but instead of seeking the cause in man we embark upon a policy of adding fluoride to drinking-water without, in my opinion, fully adequate investigation by research into the chronic effects of that, particularly in old people. I am not alone in that view. Two days ago I received a letter from one of the leading nutritional experts in the U.S.A. in which he mentions his recent experimental results that cause him to question the value of fluoridation. . . . health may be injured and science brought to disrepute by the incautious and premature application to public health of insufficiently investigated procedures. Enthusiasm to apply the fruits of research is laudable, but eagerness must be tem-

pered with wisdom, which includes having all the relevant facts available.

Processing of foods. . .

"Almost every alteration we make tends to decrease the trinity of vitamins I have mentioned [essential fatty acids, vitamin E, vitamin B₆], and in some instances adds antagonistic fatty acids that increase the dietary need of the essential ones. It has been known for twenty years that the fat of cows and sheep contains very little of the essential fatty acids and a large amount of an isomer that may be antagonistic [an isomer is a chemical molecule with the same number and kind of atoms as another, but of different structure]; milk, butter, dripping [fat melted from roasting meat], and the fat of the meat of these animals are seriously deficient, therefore, and the time may well come when we shall have to abolish the cow unless we undertake research to overcome this defect by alteration of the fat of milk or of the balance of the diet. . . .

"Further, our present practice of producing prime beef and mutton by feeding stable concentrates decreases the unsaturated fatty acid content further. We do the same with pigs, and we stabilize lard to make it keep better. Then we fry it, which not only tends to destroy essential fatty acids but can produce substances that will cause cancer in rats and mice. We feed hens on concentrates that are deficient in the unstable fatty acids, and the eggs in consequence are deficient. We hydrogenate fats to make margarine, though some margarine contains important amounts of essential fatty acids. . . .

"This Food and Drug Administration in the U.S.A. has stated that of 704 chemicals used in foods no fewer than 428 are known to be innocuous. Perhaps that is comforting, perhaps not. And those believed to be innocuous are so classified because they do not kill rats or mice. Man is a different animal, as is sometimes forgotten. When, after some ration trials I attended in Canada during the war, it was found that a soup prepared by a U.S.A. scientist made ill those troops who managed to drink it, he plaintively remarked: 'That's odd! Rats grew all right on it.' We know a great deal about animal nutrition, and millions of pounds are spent in its study, yet only a negligible sum is spent upon research into human nutrition. . . .

"Much knowledge is still to be gained by studying food practices that are hallowed by tradition and established in folk-lore. . . .

" . . . nutrition has now become the most important single environmental factor affecting health in every country of the world."

Cadillac 62



THE *Cadillac* has by far the largest sales in the highest priced group of American cars. *Cadillac's* sales were about 122,000 in 1958 or about three times the combined sales of *Lincolns* and *Imperials*, *Cadillac's* nearest competitors. The *Cadillac* division hopes to sell 150,000 cars this year.

Compared to last year's model, the 1959 model is 8 inches longer, 5 inches lower, and its new engine is rated at 325 horsepower (last year's rating was 310 horsepower).

Cadillac 62 specifications

Taxable horsepower	51.2
Taxable weight, pounds	4770
Engine	
Piston displacement, cubic inches	390
Rated maximum horsepower at stated rpm.	325 at 4800
Compression ratio	10.5 to 1
Oil filter	partial flow
Grade of gasoline required	premium
Cooling system capacity with heater, quarts	19.25
Chassis and body	
Wheelbase, inches	130
Over-all length, inches	225
Width, inches	80
Height, inches	53.7
Tires	8.00 x 15
Brake area, square inches	210
Minimum road clearance, inches	5.9
Steering wheel turns, full left to full right	3.5 (power)
Other details	
Battery	12-volt 70-amp. -hr.
Gasoline tank capacity, gallons	21
Curb weight of car tested, pounds	Approx. 4970

Safety

Although the *Cadillac* is the prestige car of the General Motors line, its designers have apparently given no greater attention to safety than have those who developed General Motors' lower priced cars. *Cadillac* doors offer the same serious hazard to children's fingers as the *Chevrolet*, *Buick*, *Pontiac*, *Oldsmobile*, and *Chrysler*-built cars. (See *CONSUMER BULLETIN*, March 1959, page 20.) *Cadillac*'s tubular X-type frame, used also by *Chevrolet* and *Pontiac*, does not afford the protection, in the event of a sidelong collision, that exists in cars with sturdy side rails. The automatic headlight dimmer responds to reflected light from snowbanks and other strongly reflecting objects, and obviously on winding turns losing the high beam when traveling at high speed can present a rather serious hazard. There was no hood ornament, but an ornament presenting some hazard was used on each of the front fenders.

Prices

Cadillac 62, 4-door sedan, factory suggested base price, \$5080; radio with rear speaker, \$164.60; heater, \$128.70; power seat, \$118.45; power window regulators, \$118.45; *Autronic eye*, \$55.25; tinted glass, \$51.70. These prices do not include freight. Automatic transmission, power steering, and power brakes are standard equipment on the *Cadillac*.

Riding and handling qualities

The ride was smooth and well controlled on all types of roads, and the rumble which was noticeable on last year's *Cadillac* car on rough roads has been eliminated. The noise level inside the car was very low under all conditions. Behavior of the car on corners was very good, and the power steering gave good road feel. Seats were well designed, with ample support for the back.

Performance on road tests

Acceleration times were: from 20 to 50 miles per hour, 4.9 seconds; from 40 to 60, 4.4 sec. This makes the *Cadillac* one of the fastest accelerating cars tested this year. The new *Cadillac* was considerably faster in pick-up than last year's model.

Gasoline mileage under test conditions

At a constant speed of 50 miles per hour, the gasoline mileage was 19.3 miles per gallon, which was better than any other 8-cylinder car tested, including the *Rambler Rebel*. Evidently designers *can* build a reasonable degree of economy even into engines of very high horsepower when they put their minds to it.

Speedometer errors

Indicated speed, m.p.h....	30	50	60
Actual speed, m.p.h.....	27.5	47.5	57

The odometer was approximately 2 percent fast.

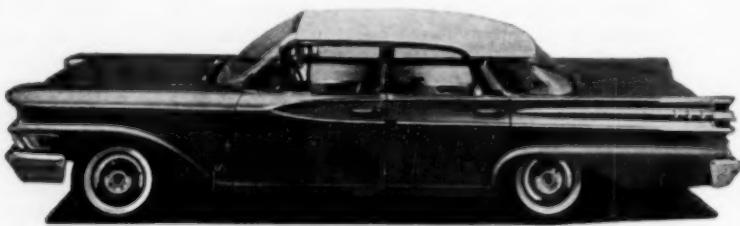
Brakes

The brakes performed adequately, and there was no appreciable brake fade in 10 stops from 70 miles per hour.

Conclusions

The *Cadillac 62* is unquestionably an excellent car, whose designers appear to have put in effective efforts to make it a top quality automobile. The styling of the exterior of the car at the rear is ultramodern, and far from conservative, and in CR's opinion out of keeping with the rest of the car. Style, however, is always a matter of personal preference.

Mercury



LAST YEAR, Mercury had the dubious distinction of offering an optional engine with the highest rated horsepower (400) of any car. This year the rated horsepowers have been reduced very substantially on the *Monterey* (from 312 to 210) and slightly on the *Montclair* (330 to 322) and *Park Lane* (360 to 345), a step in the right direction. Optional engines are no longer offered on the *Montclair* and *Park Lane*.

Over-all lengths have been increased by 5 inches (3 inches on the *Park Lane*). The transmission hump has been moved forward, permitting a somewhat more comfortable seating position for the center passenger.

The huge windshield, 60 percent larger in area than in last year's *Mercury* cars, curves into the roof and is likely to make the interior of the car uncomfortable on hot sunny days. The front-seat adjustment control is located so close to the side of the door that it is difficult to operate without opening the door. The heater and defroster were adequate under severe conditions, and fan noise was low. The car was hard to start in rainy weather; the trouble was found to be due to the shorting out of a resistor in the ignition circuit which was so located that it got wet from water coming down the vent.

Safety

The windshield wipers work in unison and wipe a large area without any blind spot in the center (desirable). Some of the controls and interior

door handles had sharp edges which could be hazardous. The windshield wiper control knob presented a particular hazard to the knees of the passenger in the center of the front seat. The shift quadrant was poorly located and partly obscured by the steering wheel hub and spokes when the wheel was not in the straight ahead position. The hood ornament was a small circle with the letter M and considered not potentially dangerous as hood ornaments go; on the other hand, the hoods over the headlamps are of a kind that can be dangerous to pedestrians.

Prices

Mercury Monterey, 4-door sedan, factory suggested price, \$2831.50; *Merc-O-Matic* transmission, \$225.80; radio, \$87; heater and defroster, \$109.45; white sidewall tires, \$41; power steering, \$107.50; power brakes, \$43.75; two-tone paint, \$17.20; undercoating, \$17.80. (These prices do not include freight.)

The lowest-priced *Mercury* 4-door sedan is about \$550 higher in price than the *Ford Custom 300* and \$150 above the *Edsel Ranger 8*.

Riding and handling qualities

Riding quality was very good at all speeds on turnpikes, and the car handled with a minimum of effort on the part of the driver. The power steering was fast and positive, and there was a definite tendency to over-steer on fast turns. The car was found to be very sensitive on wet and

Mercury specifications

	Monterey	Montclair	Park Lane
Taxable horsepower	46.2	59.2	59.2
Taxable weight, pounds	3965	4225	4390
Engine			
Piston displacement, cubic inches	312	383	430
Rated maximum horsepower at stated rpm.	210 at 4400	322 at 4600	345 at 4400
Compression ratio	8.75 to 1	10 to 1	10 to 1
Oil filter		Full flow	
Grade of gasoline required	Regular	Premium	Premium
Cooling system capacity with heater, quarts	21	22	22
Chassis and body			
Wheelbase, inches	126	126	128
Over-all length, inches	218	218	223
Width, inches		81	
Height, inches	55.5	56	56
Tires	8.00 x 14	8.50 x 14	9.00 x 14
Brake area, square inches		205	
Minimum road clearance, inches		6.0	
Turning diameter, feet	43.9	43.9	43.8
Steering turns, full left to full right	5.4	5.3	3.7 (power)
Other details			
Battery	12-volt 55-amp.-hr.	12-volt 65-amp.-hr.	
Gasoline tank capacity, gallons		20	
Windshield wipers		Electric	
Curb weight of car tested, pounds	4280	—	—

slippery surfaces, and it tended to go into a skid easily. Seats were comfortable. Noise level was very low.

Performance on road tests

Acceleration times were: from 20 to 50 miles per hour, 5.8 seconds; from 40 to 60, 8.0 sec.; these times were judged more than ample for any reasonable driving use (about the same as the *Pontiac* in the 20-50 range).

Gasoline mileage under test conditions

At a constant speed of 50 miles per hour, the gasoline mileage was 17.4 miles per gallon (a figure better than that obtained with the *Ford V-8*).

Brakes

Pedal pressure increased after the fifth stop from 70 miles per hour and continued to increase until,

at the tenth brake application, it became most difficult to stop the car. There was thus a definitely undesirable degree of brake fading, with use of normal foot pressure.

Speedometer errors

These were in the usual direction (+), but unusually large.

Indicated speed, m.p.h. 30 50 60
Actual speed, m.p.h. 27 43 50

The odometer was about 2 percent slow.

Conclusions

The *Mercury* is considered to be a satisfactory car, about equivalent in performance and comfort to the *Pontiac* or *Dodge*, but is judged not to be as satisfactory a car overall, or as much for the money, as the *Oldsmobile*.

Pontiac



IT IS cheering to note that of the manufacturers of the larger cars, at least one, Pontiac, is aware that there are consumers interested in economy of operation and moderate horsepower. Pontiac now offers, without any difference in price below the standard engine, an economy engine available with all their *Hydra-Matic*-equipped cars. This engine is rated at a modest 215 horsepower with an 8.6 to 1 compression ratio (modest, that is, by comparison with other engines in the *Pontiac* line), and it will operate on regular gasoline. With a special low ratio (2.87 to 1) rear axle, the car with the 215-horsepower engine is claimed to give exceptionally good mileage for a car of its size. Pontiac advertising for this economy-equipped car claims an average of 21.7 miles per gallon for a 2443-mile trip coast to coast.

CR unfortunately was unable to obtain in time for this report a *Pontiac* with the special 215-horsepower engine. The car tested had the standard 245-horsepower engine with 3.08 to 1 rear axle; the best gasoline mileage obtained with this car under ideal conditions at a constant speed of 50 miles per hour was 17.8.

The 1959 *Pontiac* is probably the most conservatively styled of all General Motors cars this year. The tail fins are small, and although, in common with other GM cars, the *Pontiac* has a box-like front, its over-all appearance is rather pleasing. The car has an extremely wide tread (distance from center line of left wheels to center line of right wheels), an increase of nearly 5 inches over last year, which is claimed to increase handling ease and safety. The body is almost 4 inches wider than last year, certainly not a change for the better from the standpoint of the public in general.

General comments

The directional signal lamps at the front are not as big as they should be; they should be better located and not be so vulnerable to the accumulation of dirt. Indicating lights are used instead of instruments for the water temperature and oil pressure. However, instead of the now usual indicating light, an ammeter is used (desirable). There are multiple reflections in the instrument

cluster from the surrounding chrome. Reading the instruments during the day was found to be difficult, but at night they were found to be well illuminated and easy to read. The gas filler pipe entrance is through a small flap-covered port at the rear below the trunk lip of the car; the gas tank cap was poorly finished and difficult to remove.

Although the spare tire was anchored flat on the floor of the trunk compartment, it was readily accessible because of the large storage volume of the trunk. Headroom is satisfactory, but the high tunnel and low seats will tend to make riding extremely uncomfortable for the center passengers on a long trip. The heater was adequate, and the defroster system worked well, but with the heater fan in operation, hot air is blown into the driver's face, due to the position of the blower duct (an undesirable arrangement).

The glove compartment was too shallow (front to back) to be of much value and was not readily accessible to the driver. Although the manufacturer recommends regular gasoline for this car, there was noticeable ping with regular gas on full acceleration after the car had been used for 500 miles of travel.

Safety

There was no dangerous hood ornament to act as a spear, but there were undesirable non-functional blunt-pointed ornaments on the fenders. The rear doors when locked from the inside cannot be opened by operating the interior door handles (a good safety feature for the protection of children).

The hazard to children's fingers from the doors (see Figure 3, page 20, March 1959 BULLETIN) is the same on the *Pontiac* as on other General Motors and Chrysler cars.

Prices

The posted price of the test car, a *Catalina Vista* 4-door hardtop sedan, was \$3736.44, and was itemized as follows: factory list, \$2844 (the 4-door sedan is \$2704); deluxe radio, \$101.65; heater and defroster, \$101.65; *Super Hydra-Matic* transmission, \$231.34; power steering, \$107.50; power brakes, \$43; heavy-duty air cleaner, \$7.15; oil filter, \$9.65; white sidewall tires, 8.00 x 14, \$41.28;

electric clock, \$19.70; "decoration group," \$54.50; latex foam front seat cushion, \$10.75; inside split-beam mirror, \$4.90; outside rear-view mirror, \$6.34; vanity mirror, \$1.65; cigarette lighter and ash tray lamps, \$7.40; "courtesy lights," \$7.65; trunk light, \$8.05; parking brake lamp, \$5.75; glove compartment lamp, \$3.30; spare wheel tire cover, \$2.58; anti-freeze, \$8.14; shipping charge, \$92.75.

Pontiac Catalina specifications

Taxable horsepower	52.8
Taxable weight, pounds	3940
Engine	
Cylinder arrangement	V-8, valve-in-head
Piston displacement, cubic inches	389
Rated maximum horsepower at stated rpm.	245 at 4200
Compression ratio	8.6
Oil filter	Full flow (at extra cost)
Grade of gasoline required	Regular
Cooling system capacity with heater, quarts	22.4
Chassis and body	
Wheelbase, inches	122
Over-all length, inches	214
Width, inches	80.7
Height, inches	56.4
Tires	8.00 x 14
Brake area, square inches	170
Minimum road clearance, inches	5.8
Turning diameter, feet	42.5
Steering wheel turns, full left to full right	5.6 (4.0, with power steering)
Other details	
Battery	12-volt 53-amp.-hr.
Gasoline tank capacity, gallons	21.5
Curb weight of car tested, pounds	4310

Riding and handling qualities

Cornering ability of the *Pontiac* was very good, and there was no fender dip on sharp turns. Riding quality was good on smooth roads, but on rough roads there was rear wheel hop and some steering wheel vibration, and the noise level (rumble) from the rear wheels transmitted to the rear compartment was very noticeable.

Performance on road tests

Acceleration times were: from 20 to 50 miles per hour, 5.6 seconds; from 40 to 60, 4.9 sec. This very high accelerating ability is about the same as obtained on the *Buick LeSabre* and *Oldsmobile 88*, and in CR's opinion is considerably above a figure that is safe for the average driver.

Gasoline mileage under test conditions

At a constant speed of 50 miles per hour, the 245-horsepower *Pontiac* gave 17.8 miles per gallon, which was about the same as obtained on last year's model with an engine of about the same rated horsepower.

Speedometer errors

Indicated speed, m.p.h. 30 50 60
Actual speed, m.p.h. 27 46.5 56.5
The odometer was about 3 percent fast.

Braking

The brakes performed adequately, and on the car tested there was no appreciable brake fade in 10 stops from 70 miles per hour.

Conclusions

The *Pontiac Catalina* is a good car of its type, well finished, with good quality control. It is judged to have much too fast acceleration for the average driver's needs. With the economy engine briefly discussed in the first part of this article, the *Pontiac* is certainly worthy of consideration by those who feel they must have a "big" car in the middle price group, with the prestige values that may be associated with large size and a higher price bracket for their automobile.

Emendations to Consumer Bulletin

35 mm. cameras
Page 7, Oct. '58 Bulletin

Olympus Model SII. Change rating of this camera from *A. Recommended* to *B. Intermediate*. Consumers' Research has received reports that a substantial number of cameras of this make have been found defective, indicating the lack

of adequate inspection and quality control.

A drill press for the home workshop
Page 22, Col. 2, Feb. '59 Bulletin

The price of the *Atlas Model 1010* drill press was incorrectly given as \$74.50. The correct list price is \$102.75 (without motor).

● OFF THE EDITOR'S CHEST

Stereo records begin to offer good listening

IT LOOKS as if stereo records may have a bright future. Critics who complained about the "ping-pong" effect and the "hole in the middle," and who grew a bit weary of demonstrations of stereo equipment with the "Dukes of Dixieland," a pioneering stereo record, are now beginning to change their tune. There was some question whether stereo sound would be a flash-in-the-pan novelty like stereo movies, that were soon abandoned as an inconvenient and unworkable technique, but apparently stereo sound has real appeal and is arousing considerable public interest.

Early difficulties are being ironed out and, whatever the merits of various pieces of stereo equipment, there is no doubt that a second speaker or speaker system hooked up to a monophonic high-fidelity system "gives heavenly sound," as one devotee put it, and improves the listening quality tremendously. The improvement is really startling to a person whose audio equipment has hitherto included only a single speaker.

Stereophonic sound itself is not new, but its availability in moderate-priced mass-produced sets and component parts is a recent development. The effect of such reproduction at its best has been described as that of listening to a performance from "the best seat in the house." Its basic characteristic is that it uses double the number of several important components of the conventional monophonic equipment, two speakers or speaker systems and two amplifiers, but only one dual preamplifier and one cartridge (with a dual electric-current-generating mechanism), and one turntable. The basic requirement of two speakers, properly spaced 8 to 10 feet apart, is likely to make the woman of the household unhappy about arrangement of her furniture, but at its present stage of development, true stereo sound cannot be achieved with a compact cabinet that houses both speakers within a small space.

The general public has been somewhat confused about the new development in sound, and dealers have complained that not enough effort has been made by manufacturers to educate the novice in the techniques and merits of the new audio equipment. Notice has apparently been taken of this discontent, for stereo-high-fidelity trade shows are being put on with considerable success in various parts of the country, and not just for the high-brow engineers and experienced hi-fi devotees, either. There have been a number of demonstrations of a considerable variety of

stereo equipment, in a wide range of prices. Although hi-fi is considered to be predominately a man's hobby, dealers have noted with gratification an increasing number of women at the shows, perhaps to discover what the new equipment may mean in the matter of furniture arrangement in the living room. There is also some indication that the manufacturers have this problem in mind. At a New York show, for example, one manufacturer exhibited two speakers that resembled oversize brass-bound books (with holes punched in the brass through which the sound emerged). These big "books" were located at the extreme right and left on an old-fashioned ceiling-high bookcase, that was otherwise filled with books and bric-a-brac.

Those who do not like to tinker and experiment are still advised to wait before expending any considerable sum of money for a stereo sound system. There is at present no satisfactory all-in-one neat cabinet that houses all speakers and other component parts. Indeed, in view of the nature of stereo sound, it is extremely unlikely that there will ever be any satisfactory technique for incorporating two or more speakers in a single small cabinet to provide true stereophonic sound. For those who have a good high-fidelity sound system, the best plan appears to be to add a matching speaker as a first step toward a complete stereo system.

Stereo recordings, at first considered unsatisfactory or of interest chiefly as stunts in musical sound effects, are now reported to be quite good. One reviewer has announced that he is discontinuing the purchase of monophonic records unless the performer he wants to listen to is not yet recorded stereophonically. Many new or hitherto little-known companies are putting out stereo records. Classical music is being pressed on stereo in increasing numbers and it is no longer necessary to listen to "Dukes of Dixieland" to obtain a demonstration of stereo equipment. The Schwann Record Catalog, standard reference in the trade, lists each month an ever-growing number of stereo recordings in the Classical—Instrumental and Vocal classifications.

The stereo disk, which is made by feeding sound through three or more separate microphones, recorded on three separate channels that are finally reduced to two and then picked up by a single needle, costs the purchaser around a dollar

more than the monophonic LP's. Since many of the monophonic disks sound well when played with a stereo cartridge, it is not expected that they will become obsolete overnight. Some new recordings are available in both monophonic and stereo form. Whether the major record companies will eventually discontinue monophonic pressings altogether is a question that no one is prepared to answer at the present time. Nevertheless, it will be wise for those who make large purchases of records to take this possibility into account. It is possible to play monophonic records with a good stereo pickup, with considerable satisfaction and a minimum amount of damage to the record. It is NOT possible to play stereo records with a monophonic cartridge without ruining the record.

Although there is much to be done in the develop-

ment and improvement of present stereophonic sound equipment, all signs point to stereo as an advance in the technique of reproducing music. Beginning in CONSUMER BULLETIN, July 1959, Walter Grueninger will review stereo disks as well as monophonic records. Appropriate symbols will be used to differentiate the two. Although the changeover in his high-fidelity system has been expensive, Mr. Grueninger comments that "folks do not realize how good monophonic sound can be if they have only a one-speaker system" and notes that "the best stereo improves even that spacious effect." By fall, it is expected that the new sound techniques will be well launched in consumer acceptance—as they say on Madison Avenue. Perhaps the family may want to start saving now for their Christmas gift to the man of the household.

Brief Cumulative Index of Previous 1959 Consumer Bulletins

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Entries marked () are longer or more comprehensive items.

Phonograph Records

BY WALTER F. GRUENINGER

Please Note: The first symbol applies to quality of interpretation, the second to fidelity of recording.

Bartok: *Roumanian Folk Dances* & **Shostakovich:** *Two Pieces for String Octet* & **Prokofiev:** *Overture* & **Stravinsky:** *Octet*. Winograd conducting Members of the MGM Orchestra. MGM E 3684. \$3.98. You're not likely to hear these pieces in routine concert going. Not that they tower as high as masterpieces and should be heard often. But for the adventuresome, here's relatively new repertoire sensitively played and acceptably recorded. **AA A**

Beethoven: *Symphony No. 3*. Columbia Symphony Orchestra under Walter. Columbia ML 5320. \$3.98. Though well served on LP's, overall there is no better "Eroica." Magnificent, sweeping, romantic playing. Marvelous recording. High on the list, too, are the disks by Reiner, Klemperer, Toscanini—the latter less well recorded than the Bruno Walter. **AA AA**

Buxtehude: *Five Sacred Cantatas*. Krebs, Fischer-Dieskau (singers) and Strings of the Bach-Orchestra, under Goryvin. Archive ARC 3096. \$5.95. Splendid example of Buxtehude's vocal style which preceded Bach's by about half a century. Superbly sung and played and satisfactorily recorded. **AA A**

Corelli: *Concerti Grossi* (Op. 6 complete). Chamber Orchestra of the Societas Musica under Hansen. 6 sides, Bach 585/7. \$9.96. Twelve lovely 17th century works, originally composed as violin sonatas but later transcribed by Geminiani. Hansen and his colleagues do right well by the music, but there's even better playing and equally good recording on Vox PL 7893. **A A**

Delibes: *Sylvia*. London Symphony under Fistoulari. 4 sides, Mercury OL-2-106. \$7.96. Only recording of the complete ballet, generally regarded as nearly the equal of Delibes' *Coppélia*. Fistoulari knows ballet from widespread experience, and he turns in more than a routine job. But some of his soloists lack virtuosity, and orchestral spots lack sparkle. You'll hear more nuance, too, in London LL 846 in which Désormière conducts a suite from this ballet. Satisfactorily recorded, though not the ultimate in clarity. **A A**

Donizetti: *Lucia di Lammermoor*. Peters, Pearce, Tozzi, etc., under Leinsdorf. 4 sides, RCA Victor LM 6055. \$9.96. Donizetti's most famous work, played often in the opera houses of the world and a great vehicle for the star soprano who, in this recording, is Roberta Peters. She has little trouble with the difficult title role, though there's far more characterization in Callas' performance on Angel 3503. The other singers support Miss Peters well enough, but Pearce often sounds constricted. Yet, nowhere is there evidence this is more than a run of the mill performance. The too-lively speed adopted by Leinsdorf merely confirms this observation. Better buy Angel 3503. **B A**

Dvorák: *Slavonic Dances* (Op. 46 and 72) (3 sides) & **Metamta:** Excerpts from *The Bartered Bride* (1 side). Minneapolis Symphony under Dorati. Mercury OL 2-107. \$7.96. There's a thump and a swing to these pieces that endears them to the man who likes "serious" music as well as the one who knows what he likes but doesn't know why. But in performance and recording the extensive Dvorák dances are better served by Szell on Epic SC 6015. **B A**

Haydn: *Symphonies Nos. 100 and 101*. Vienna State Opera Orchestra under Wöldike. Vanguard SRV 109. \$1.98. Two of Haydn's most popular symphonies played with verve and skill, if not the last word in nuance. Well recorded . . . and only \$1.98! **A AA**

Kay: *Stars and Stripes* and *Cakewalk*. Boston Pops Orchestra under Fiedler. RCA Victor LM 2240. \$4.98. Suites from the ballets. The first is based on John Philip Sousa music and the second on Gottschalk music. Both probably gain when heard in conjunction with the ballet. Well defined, rhythmic, blazing performances. Good sound. **AA A**

Mozart: *Requiem*. Vienna State Opera Orchestra, Soloists, etc., under Scherchen. Westminster XWN 18766. \$5.95. Impressive, dramatic performance of a masterpiece. You hear it through with less sense of repose than of excitement. It's one legitimate way to conduct the work, though others stress the resigned, lyric qualities as Kempe does so beautifully in Capitol G-7113. You take your choice. Soloists Jurinac, Loeffler, and West are excellent, and Guthrie is acceptable. The orchestra and chorus are superb. **AA AA**

Mozart: *Piano Music for Four Hands*. Vol. 1. Ingrid Haebler and Ludwig Hoffmann (piano). Vox DL 432-1/2. \$4.98. You'll find no masterpieces in these three sonatas, but plenty of agreeable music. Fluently played. Very well engineered. **AA AA**

Strauss: Suites from *Der Rosenkavalier* and *Die Frau ohne Schatten*. Philadelphia Orchestra under Ormandy. Columbia ML 5333. \$3.98. *Der Rosenkavalier* appears to be an oft-recorded favorite of Ormandy whereas the overture selection is recorded for the first time. Fine broad tunes, rich harmonies—particularly in *Der Rosenkavalier*. Authoritative ensemble which performs with vitality. Well recorded. **AA A**

Tchaikovsky: *Symphony No. 4*. N. Y. Philharmonic under Bernstein. Columbia ML 5332. \$3.98. Bernstein wears his heart on his sleeve when conducting this great romantic symphony. He likes to play slow and then speed it up. There is no perfect No. 4 on disks, though until a better one comes along, I'll stand by the Sanderling-conducted Decca DL 9879. Sound in the last movement of the Bernstein recording becomes hashy. **B A**

Telemann: *Concerto for 4 Violins* and *Concerto for 3 Oboes*, 3 violins and *Concerto for German flute, oboe d'amore, viola d'amore and Concerto for recorder, German flute, strings*. Various soloists and orchestra under Emil Sailer. Archive ARC 3109. \$5.95. Pieces that are generally colorful, exciting, elegant, well contrasted, light in character. Nicely played and satisfactorily recorded. Altogether a good introductory disk to this early 18th century master who outlived Bach. **AA A**

Cadet Chapel Organist, West Point. John A. Davis, Jr. Vox VX 25800. \$3.98. Interesting, diversified group of selections heard at organ concerts. Tidy, sensitive playing. Well recorded, as from some distance, though the ultimate in clarity, bass and volume range is absent. **AA A**

Judy Garland at the Grove (vocalist). Capitol T 1118. \$3.98. On-the-spot recording of Judy Garland's opening at the Cocacut Grove in Los Angeles. The dynamic voice of half a dozen years ago sounds a bit threadbare now. Yet, Garland fans may rejoice in her singing of "You Made Me Love You," "For Me and My Gal," "The Trolley Song," and other favorites. Fairly well recorded. **B A**

Madrigals of John Wilbye. The Deller Consort (singers). Bach 578. \$4.98. These 14 works by one of the masters of the madrigal form who wrote in the early 17th century are beautifully sung and recorded. It is a fitting companion record to the same group's singing of madrigals by Thomas Morley on Bach 577. **AA AA**

Strauss Family Album. Minneapolis Symphony under Dorati. Mercury MG 50178. \$3.98. Four Strauss' contribute to this collection of overtures, polkas, waltzes. Delightful, spirited, colorful music played with proper romantic feeling. Close-in, hi-fi recording. **AA AA**

Tango Argentino. Atilio Stampone and His Orquesta con Bandoneon del Tango. Audio Fidelity AFLP 1880. \$5.98. Twelve tangos recorded in Buenos Aires. Greater freedom for the players and less pronounced beat than commonly heard when our countrymen play tangos. The accordion plays a prominent part in these lush—perhaps too lush—arrangements. **AA AA**

Ratings of Current Motion Pictures

THIS SECTION aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Boxoffice, Cine, Daily News (N. Y.), The Exhibitor, Films in Review, Harrison's Reports, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency, Newsweek, New York Herald Tribune, New York Times, The New Yorker, Parents' Magazine, Release of the D. A. R. Preview Committee, Reviews and Ratings by the Protestant Motion Picture Council, The Tablet, Time, Variety (weekly).

The figures preceding the title of the picture indicate the number of critics whose judgments of its entertainment values warrant a rating of A (recommended), B (intermediate), or C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adr—adventure
biog—biography
c—in color (Anaco, Eastman, Technicolor, Tricolor, Warner Color, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
sci—science fiction
soc—social-problem drama
trav—travogue
war—dealing with the lives of people in wartime
west—western

A	B	C	A	B	C				
—	2	1	Accursed, The (British)	mys-mel AY	—	2	3	First Man into Space (British)	...sci AY
—	3	1	Affairs of Julie, The (German)	com-c AY	—	1	3	Flesh and Desire (Italian)	...dr A
—	4	1	Al Capone	cri-mel A	—	2	2	Forbidden Fruit (French)	...dr A
—	1	5	Alaska Passage	mel A	—	1	7	Forbidden Island	...mys-mel-c A
—	3	2	Alias Jesse James	wes-c AYC	—	8	—	Foxiest Girl in Paris, The (French)	...cri-com A
—	6	10	Anna Lucasta	dr A	—	—	7	Frankenstein's Daughter	...mel A
—	3	1	Aparajito (India)	dr AY	—	1	7	From the Earth to the Moon	...sci-c AYC
—	1	4	Arson For Hire	cri-mel AY	—	—	5	Frontier Gun	...wes AY
—	3	13	Auntie Mame	com-c A	—	4	5	Geisha Boy, The	...com-c AY
—	3	4	Bandit of Zhobe, The (British)	dr-c AYC	—	7	6	Gidget	...mus-rom-c AY
3	6	7	Barbarian and the Geisha, The	dr-c AYC	—	1	6	Girl in the Bikini, The (French)	...dr A
—	1	10	Bell, Book, and Candle	com-c A	—	1	2	Girl with an Itch	...dr A
—	1	11	Black Orchid, The	dr AYC	—	2	3	Good Day for a Hanging	...wes-dr-c AYC
—	9	6	Blob, The	sci-mel-c AY	—	1	4	Grand Canyon	...mus-doc-c AYC
—	5	5	Blood of the Vampire (British)	mel-c A	—	2	4	Great St. Louis Bank Robbery, The	...cri-mel A
—	2	1	Boot Polish (India)	dr A	—	3	1	Green Mansions	...nov-c AY
—	1	5	Brain Eaters, The	cri-mel AY	—	1	6	Guitars of Love (German)	...mus-dr A
—	3	6	Buccaneer, The	hist-dr-c AYC	—	1	4	Gunmen from Laredo	...wes-c AY
—	6	1	City of Fear	cri-mel A	—	3	4	Guns, Girls and Gangsters	...cri-mel A
—	3	1	Cocktails in the Kitchen (British)	com-c AY	—	3	2	Gypsy and the Gentleman, The (British)	...mel-c A
—	1	5	Compulsion	soc-dr A	—	4	Half Human (Japanese)	...sci AYC	
—	2	4	Cosmic Man, The	sci AYC	—	2	8	Hanging Tree, The	...wes-c A
—	1	4	Cosmic Monster, The (British)	sci-mel AY	—	1	7	He Who Must Die (French)	...dr A
—	4	4	Crawling Eye, The (British)	sci-mel AY	—	2	4	Hell Squad	...war-mel AY
—	8	1	Cry from the Streets, A (British)	dr AY	—	1	13	Home Before Dark	...dr A
—	—	3	Date with Disaster (British)	mys-mel AY	—	3	4	Hong Kong Confidential	...mys-mel A
—	5	—	Davy (British)	com-c AYC	—	3	6	Hot Angel	...mel AY
—	7	6	Decks Ran Red, The	cri-mel A	—	7	3	House on Haunted Hill	...mys-mel A
—	6	—	Devil Strikes at Midnight, The (German)	cri-mel AY	—	2	2	House on the Waterfront, The (French)	...dr A
—	1	4	Diary of Anne Frank, The	war-dr AY	—	2	1	House Under the Rocks, The (Hungarian)	...war-dr A
—	9	5	Doctor's Dilemma, The (British)	dr-c A	—	5	—	How to Make a Monster	...cri-mel AY
—	4	3	Dreaming Lips (German)	dr A	—	1	2	Hurdy Gurdy, The (Greek)	...com AY
—	3	2	Eighth Day of the Week, The (Polish)	dr A	—	5	4	I Married a Monster from Outer Space	...sci AY
—	4	5	Enchanted Island	nov-c AY	—	1	8	I, Mobster	...cri-mel A
—	5	3	Escort West	wes AY	—	2	7	I Want to Live	...cri-dr A
—	5	1	Fearmakers, The	mys-mel A	—	1	6	I Was Monty's Double (British)	...war-mel AYC
—	—	—			—	9	6	Imitation of Life	...soc-dr-c AY
—	—	—			—	9	6	In Love and War	...war-dr-c AY
—	—	—			—	1	3	In-Between Age (British)	...mus-c AYC

A	B	C		A	B	C			
4	7	4	Inn of the Sixth Happiness, The (British).....	dr-c AYC	—	7	3	Pot Bouille (French).....	com A
—	9	1	Inspector Maigret (French).....	mys-mel AY	—	6	1	Premier May (French).....	dr AY
—	8	4	Intent to Kill (British).....	cri-mel A	—	1	6	Question of Adultery, A (British).....	soc-dr A
—	5	3	Johnny Rocco.....	cri-dr AY	—	11	5	Rally Round the Flag, Boys!.....	com-c A
—	11	4	Journey, The.....	dr-c AY	—	8	6	Remarkable Mr. Pennypacker, The.....	dr-c A
—	4	4	Joy Ride.....	mys-mel AY	—	4	2	Restless Years, The.....	soc-dr AY
—	2	7	Kill Her Gently (British).....	mys-mel AY	—	3	4	Revolt in the Big House.....	soc-dr A
—	9	6	Last Blitzkreig, The.....	war-dr AY	—	2	5	Ride Lonesome.....	wes-c AYC
5	10	3	Last Hurrah, The.....	nov AY	—	3	1	Rio Bravo.....	wes-c A
—	5	9	Last Mile, The.....	cri-dr A	—	6	9	Rocket from Calabuch, The (Spanish).....	com AY
—	1	2	Last Waltz, The (German).....	dr AY	—	3	—	Roots of Heaven, The.....	nov-c A
—	5	1	Law in the Law, The (French).....	com A	—	2	3	Sad Horse, The.....	dr-c AY
—	—	3	Legion of the Doomed.....	war-dr AY	—	1	3	Screaming Skull, The.....	cri-mel AY
—	2	5	Liane, Jungle Goddess (German).....	adv-c A	—	1	3	Secret Place, The (British).....	cri-mel A
—	2	1	Life and Loves of Mozart, The (German).....	mus-dr-c AY	—	4	2	Seneschal the Magnificent (French).....	com A
—	—	4	Little Savage, The.....	adv AY	—	7	2	Senior Prom.....	mus-com AY
—	3	2	Lone Texan.....	wes AY	—	10	1	Separate Tables.....	dr A
2	6	9	Lonelyhearts.....	dr A	—	6	2	Seventh Seal, The (Swedish).....	dr A
—	—	2	Loser Takes All (British).....	com-c A	—	9	4	Seventh Voyage of Sinbad, The.....	fan-c AY
—	—	3	Lost, Lonely and Vicious.....	dr AY	—	5	—	Shaggy Dog, The.....	fan AYC
—	5	1	Lost Missile, The.....	sci AY	—	2	2	She Gods of Shark Reef.....	mys-mel-c A
—	—	6	Machete.....	mel A	—	12	4	Sheriff of Fractured Jaw, The (British).....	wes-com-c AY
—	9	2	Mad Little Island (British).....	war-com-c AYC	—	9	—	Silent Enemy, The (British).....	war-dr AYC
—	8	2	Man Inside, The (British).....	mys-mel-c A	—	3	6	Sins of Rose Bernd, The (German).....	dr-c A
—	2	1	Man or Gun.....	wes AY	—	5	9	Sleeping Beauty.....	car-c AYC
—	2	1	Man Who Died Twice, The.....	cri-mel AY	—	7	3	Smiley Gets a Gun (British).....	mel-c AYC
1	11	4	Mardi Gras.....	mus-com-c AY	—	2	2	Snowfire.....	wes-c AYC
—	3	3	Marianne of My Youth (French).....	dr A	—	2	9	Some Came Running.....	dr-c A
—	5	2	Matting Game, The.....	com-c A	—	2	3	Some Like It Hot.....	com-c A
—	1	4	Menace in the Night (British).....	mys-mel A	—	1	6	Sound and the Fury, The.....	dr-c A
—	4	2	Miracle of St. Therese, The (French).....	dr AYC	—	1	5	Spider, The.....	sci-mel AY
—	—	7	Missile to the Moon.....	sci A	—	6	4	Step Down to Terror.....	cri-mel AY
—	8	2	Mistress, The (Japanese).....	dr A	—	5	7	Stranger in My Arms, A.....	war-dr AY
—	2	6	Money, Women and Guns.....	wes-c AYC	—	4	1	Submarine Seahawk.....	war-mel AYC
—	6	3	Monster on the Campus.....	sci AY	—	1	3	Taiga (German).....	dr A
—	3	—	Most Beautiful Day of My Life (German).....	dr-c AYC	—	1	5	Tank Battalion.....	war-mel A
—	4	1	Mugger, The.....	mys-mel AY	—	1	2	Tank Commandos.....	war-mel AY
—	5	3	Murder by Contract.....	cri-mel A	—	6	4	Tarawa Beachhead.....	war-dr AY
—	2	3	Murder Reported (British).....	cri-mel A	—	3	2	Tempest, The.....	dr-c A
—	—	4	Mustang.....	wes A	—	—	5	Ten Days to Tulara.....	cri-mel AY
—	11	1	My Uncle, Mr. Hulot (French).....	com-c AY	—	—	6	Terror from the Year 5,000.....	sci AY
—	—	3	My World Dies Screaming.....	cri-mel AY	—	1	4	These Thousand Hills.....	wes-c A
—	2	3	Naked Maja, The.....	dr-c A	—	1	4	Third Sex, The (German).....	soc-dr A
1	4	8	Never Steal Anything Small.....	cri-mel-c A	—	3	4	Tokyo After Dark.....	war-dr A
—	1	2	New Orleans After Dark.....	cri-mel AY	—	8	—	Tom Thumb (British).....	fan-c AYC
—	4	4	Nice Little Bank that Should Be Robbed, A (British).....	cri-com AY	—	1	5	Tonka.....	wes-c AYC
—	3	3	Night of the Blood Beast.....	sci A	—	1	9	Torpedo Run.....	war-dr-c AYC
—	3	9	Night of the Quarter Moon.....	soc-dr A	—	1	3	Tosca (Italian).....	mus-dr-c AY
3	10	2	Night to Remember, A (British).....	dr AYC	—	5	5	Trap, The.....	cri-mel-c AY
—	5	2	Nine Lives (Norwegian).....	war-dr AYC	—	9	1	Tunnel of Love, The.....	com A
—	4	1	No Name on the Bullet.....	wes-c A	—	2	5	Two-Headed Spy, The (British).....	war-mel AY
—	2	1	No Place to Land.....	mel A	—	5	6	Unwed Mother.....	soc-dr A
—	3	2	Nowhere to Go (British).....	cri-mel AY	—	6	2	Up Periscope.....	war-mel-c AYC
—	1	2	Octet (Danish).....	dr AYC	—	6	2	Up the Creek (British).....	war-com A
—	3	1	Of Life and Love (Italian).....	dr A	—	3	—	Watutsi.....	adv-c AYC
—	8	9	Onionhead.....	war-com A	—	6	3	What Price Murder? (French).....	cri-mel A
—	—	3	Operation Dames.....	war-com A	—	3	5	When Hell Broke Loose.....	war-mel AY
2	4	4	Orders to Kill (British).....	war-dr AY	—	2	3	Wild and the Innocent, The.....	wes-c AY
—	4	1	Paratroop Command.....	war-mel A	—	2	3	Wind of Hate (Greek).....	mel A
—	6	7	Party Girl.....	cri-mel-c A	—	1	3	Windom's Way (British).....	war-mel-c AY
—	—	3	Passport to Shame (British).....	soc-dr A	—	2	4	Witches of Salem (French).....	dr A
—	6	1	Pepote (Spanish).....	dr AY	—	4	—	Wolf Larsen.....	mel A
1	11	5	Perfect Furlough, The.....	war-com-c A	—	3	4	Woman in the Painting, The (Italian).....	dr AYC
—	—	—			—	3	4	Young Captives, The.....	mel A

The Consumers' Observation Post

(Continued from page 4)

CERTAIN VARIETIES OF FLORIDA ORANGES that ripen in the period from October through December have a greenish hue that makes them unacceptable to consumers who do not realize that color of such oranges is not an index of maturity. The result is that in order to compete with California fruit the Florida growers are accustomed to dye their fruit, and the oranges so treated are labeled "Color Added." The coal-tar dye called Red 32 previously used was banned by the Food and Drug Administration as not harmless for use on a food product, but the industry has come up with another called Citrus Red No. 2, that the color industry believes to be safe. For those who wish to take no chances with a potentially dangerous dye, it may be noted that processed juice that goes into the frozen concentrate is made from fruit that has not been colored.

* * *

THE BATTLE OF SALES CLAIMS for cold remedies this past season has been a knockdown drag-out fight with no holds barred. Anacin and Bufferin were the chief contenders for top place, according to Printers' Ink, with Bayer Aspirin and Alka-Seltzer close behind in volume of sales. A current advertising trend is to suggest quite clearly that competitors' products cause stomach upset. The frenzy of claims and counter-claims is arousing distress in groups like the National Better Business Bureau, the American Medical Association, and the American Association of Advertising Agencies, whose leaders apparently realize that this pitchman type of promotion will tend to discredit all advertising in the eyes of discerning consumers.

* * *

EXCITEMENT OVER ROYAL JELLY seems to be diminishing. Those \$1-an-ounce jars of cold cream containing the "miracle" substance, that were on abundant display in the five-and-dime stores, are disappearing. Hopeful customers no doubt discovered by trial-and-error that there were no special benefits to be obtained from diligent application of the stuff. As the Food and Drug Administration pointed out, Royal Jelly is harmless, in fact a chemical analysis revealed "that the amounts and proportion of sugars, protein, lipids, and moisture were not unlike the constituents of evaporated cow's milk." That it has any beneficial effect for human beings has never been proved scientifically.



THIS SPRING . . . before the out-of-doors gets you be sure to send in your order for the big ANNUAL BULLETIN. It's not included in a monthly subscription, you know, and by placing your order now you can make certain of getting your copy as soon as the new edition is off the press in September. . . . Tell your friends about it, too. Instead of borrowing your copy, perhaps they'd like their own subscription to Consumer Bulletin as well.

There's a handy order blank for either or both on the next page.

BARBECUED CHICKEN is a tasty and economical dish for outdoor cooking. Chicken costs less than other meats, according to the South Carolina Agricultural Experiment Station. At an outdoor barbecue it takes about 1-1/2 hours to cook a 2 to 2-1/2-pound chicken. For a large group, a barbecue stand can be made from an oil drum that will handle 20 halves at a time. The technique for preparing and cooking chicken in this fashion is set forth in the little pamphlet entitled Barbecuing Chicken, published by the Clemson Agricultural College Extension Service, Clemson, South Carolina.

* * *

AIR-CONDITIONERS of the unit type (not room air conditioners) made by 33 of the country's leading manufacturers will carry a "Seal of Certification" this year. The units bearing this seal must meet the standards that have been established by the Air-Conditioning and Refrigeration Institute in cooperation with the National Warm Air Heating and Air Conditioning Association. Participating manufacturers must agree to permit random selection of models of their make by A.R.I. for testing by an independent laboratory. If the units do not meet the advertised claims of the manufacturer, when tested according to ARI Standards 210-58 or 250-58, the manufacturer must change his product to conform, or permission to use the seal is withdrawn. The program applies to single-unit air-conditioning equipment rated at or below 135,000 Btu's. The presence of the seal indicates to the prospective purchaser that the unit's rated capacity is correctly stated and that other important minimum performance requirements have been met.

* * *

EXCESSIVE BODY WEIGHT is considered to be one of the causes of the increase in the rate of deaths from coronary disease in the middle aged. One physician believes that obesity is a challenge of the twentieth century and suggests a change in the concept of nutrition, noting that basically obesity results primarily from a disproportion of caloric intake and energy output. To maintain proper weight, good eating habits should be established in childhood. One recommendation is that high-fat foods, such as butter, ice cream, chocolate, grade A milk, and milk desserts should be reduced in the diet of American children, from their earliest years, and they should not be stressed as healthful foods. Dr. P. Marvel of New Jersey pointed out that emphasis on these foods coupled with overindulgence in sweet desserts and soda fountain delicacies has helped to increase the calories derived from fat from 30 to 40 percent in this country, the highest level of fat intake in the world.

Consumer Bulletin

WASHINGTON, NEW JERSEY

Please enter my order as checked. I am enclosing my check (or money order) for \$_____.

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I enclose \$7 (Canada & foreign, \$7.20) for one year's subscription to Consumer Bulletin monthly (12 issues) AND the big 224-page Annual Bulletin when it is ready in September 1959.

New Renewal

I enclose \$5 (Canada & foreign, \$5.20) for one year's subscription to Consumer Bulletin monthly (12 issues).

New Renewal

I enclose \$2.50 (Canada & foreign, \$2.75) for a copy of the forthcoming Annual Bulletin alone, when it is ready in September 1959.

Hood ornaments impale adults and children

Car manufacturers prefer to continue "styling" features that subject pedestrians to needless dangers

Pedestrian Hurt in Accident

Ten-year-old [REDACTED]

remained in "critical" condition at [REDACTED] hospital from injuries suffered when hit by an automobile.

[REDACTED] told police the boy darted in front of his car from between two cars parked at the curb. A hood ornament on the car punctured the boy's chest.

The following caption appeared beneath a photograph showing a sharp spear-type ornament on the hood of a popular make car:

TWO RELATED ACCIDENTS Wednesday morning on [REDACTED] Street in [REDACTED] resulted in the critical injury of a seven-year-old girl. Two little girls, apparently looking up the street toward the truck accident, were struck by a car in the [REDACTED] block on [REDACTED]. [REDACTED] suffered a serious head injury, but her friend, [REDACTED] also seven, was not seriously hurt. The offending instrument was the long, pointed hood ornament on the car driven by [REDACTED] St. It struck the [REDACTED] girl in the side of the head.

Car Ornament Plays Part In Solving Fatal Hit-Run

An automobile radiator ornament played a major part in the solution of a fatal hit-and-run case in [REDACTED] police reported last night.

The fixture was imbedded in the clothing of [REDACTED] of [REDACTED] St.

Envoy Warned On Cars

Dutch traffic policemen warned ambassadors to remove the "dangerous ornaments" on their cars or receive tickets.

The Netherlands' Parliament, concerned about injuries caused by the eagles, lions, rockets and other hood ornaments, outlawed the gadgets. Cars made in the U. S. were singled out as the chief offenders.

who was killed on [REDACTED]

ADmits GUILT

Investigators also learned that [REDACTED] radiator ornament, similar to the one found in the victim's clothing, was missing.

With this story was a picture underneath which the following caption appeared:

IMPACT POINT

Police Sgt. [REDACTED] holds flashlight on the hood ornament which drove into the back of [REDACTED]. Dent in hood shows where [REDACTED] head and shoulders hit.

This caption appeared with a photograph showing a woman impaled on a hood ornament:

PEDESTRIAN SPIKED — This woman, identified as Mrs. [REDACTED] D. [REDACTED] hangs grotesquely from car's hood ornament after being struck in [REDACTED] City suburban street. Victim is reported in critical condition.

Station Wagon Kills Boy, 9

A speeding station wagon struck a 9-year-old boy this morning and carried him 50 yards to his death.

The child was dead on arrival at [REDACTED] Hospital.

The city's accident investigator [REDACTED] said the boy was struck at [REDACTED] Street and [REDACTED] Ave. The impact knocked both sandals off his feet. The driver was [REDACTED]

[REDACTED] said the boy ran in front of his auto. The hood ornament, about 12 inches long, pierced the boy's forehead. [REDACTED] vehicle crashed into two parked cars, doing about \$225 damage.

CHILD, 3, DIES AFTER A FREAK CAR ACCIDENT

Girl's Skull Pierced by Radiator Ornament

[REDACTED] 3, daughter of Mr. and Mrs. [REDACTED] Ave., [REDACTED] who suffered a punctured skull in a freak auto accident Sunday night at [REDACTED] and [REDACTED] roads. [REDACTED] died Tuesday in [REDACTED] hospital.

The hood ornament of the car driven by [REDACTED] 40, a truckdriver, of [REDACTED] rammed through the [REDACTED] auto's right rear window, striking the girl in the head, according to the police.

Auto Kills Pedestrian On Viaduct

A [REDACTED] pedestrian, 22-year-old [REDACTED] of [REDACTED] St., was killed Wednesday night by an automobile on the [REDACTED] viaduct.

Police said [REDACTED] lived only a few minutes after he was hit by a station wagon driven southeast into downtown [REDACTED] by [REDACTED]. [REDACTED] was thrown onto the hood of the vehicle. The impact snapped his head back denting the hood. His lower back was punctured by the streamlined hood ornament.

Struck by Auto, Victim Impaled

[REDACTED] of [REDACTED] Ave. was injured critically last night when he was struck by a car at [REDACTED] Ave. and [REDACTED] St. and was impaled by the car's hood ornament.

[REDACTED] is in [REDACTED] Medical Center with knee and head injuries, multiple body lacerations and a puncture of the left side of the back.

Car manufacturers could, in a matter of weeks, discontinue use of spear-like ornaments on their cars, appendages repeatedly emphasized by CR since 1955 as real but quite needless hazards. Few newspapers will name the car, or print a picture that reveals the make of car involved in a hood ornament injury. If they did, leaders in the industry would quickly issue the necessary "stop-orders" to their stylists.

**COMING
IN FUTURE
BULLETINS**

Sunglasses

Aviation	"Safe Lens" (children's)
Bausch and Lomb Ray-Ban	Sans-Sol
Cool-Ray Polaroid (ladies')	Sears
E-Z-I	Sears Hard Glass
Rayex Magic Mirror	Tripl-Tone

Vacuum cleaners

Air-Way Sanitizer	Hoover Constellation 87
Electrolux	Hoover Convertible 66
Eureka Roto-Matic	Kenmore Satellite
Eureka Mobile Aire	Lewyt Electronic Upright
Filter Queen	Singer Golden Glide
General Electric Cord Reel	Wards Signature Upright
General Electric Swivel-Top	Wards Signature Canister

Bargains from abroad

Advice on how to buy leather goods, toys, clothing and fabrics, books, pictures, and gifts from many countries of the world.

Slide viewers

Admiral Color-Vue	Opta-Vue
Airequipt 12x	Pana-Vue
Argus Pre-Viewer II	Pana-Vue II
Argus Pre-Viewer 660	Sears Tower Pan Ram
Bi-Lens 35	Zadiix 515
Colon	Zadiix 507
Logan Power Viewer 320	

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